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AF316824 Homo sapi
AX400320 Sequence
AX454444 Sequence
AX64194 Sequence
AX429191 Homo sapi
AF316825 Mus muscu
BC034888 Mus muscu
AK027359 Homo sapi
AK000136 Homo sapi
AK07781 Oreochrom
AB037269 Xenopus 1
AN048 Sequence 1
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BC002416 Homo sapi
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    nucleic search, using frame_plus_p2n model

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Db 654 CACCCAAAAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAA 713	Oy 161 LeuSerGlulleProLeuAsnLeuProLysSerLeuAlaGluLeuArglleHisGluAsn 180 1111111111111111111111111111111111	Qy 181 LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200 11111111111111111111111111111111111	0 00 0	26	Oy 261 LysargTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIleGlu 280	Oy 281 AsnGlySerLeuAlaAsnIleProArgValArgGlu1leHisLeuGluAsnAsnLySLeu 300	Oy 301 LystysileProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSer 320	Qy 321 ASGSETILEALAARGVALGIYVALASGPRECYSPFOThrVALPFOLYSMELLYSLYS 340	Oy 341 SerLeuTyrSerAlaileSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360 	Oy 361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379 111111111111111111111111111111111111	RESULT 3 AX45444 LOCUS LOCUS DEFINITION Sequence 29 from Patent W00208284.		ORGANISM HOMO Saptems Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1	AUTHORS Baker,K.P., Ferrara,N., Gerber,H., Gerricsen,M.E., Goddwski,P.J., Gurney,A.L., Hillan,K.J., Marsters,S.A., Pan,J., Paoni,N.F., Stephan,J.P., Watanabe,C.K., Williams,P.M., Wood,W.I. and Ye,W.	TITLE Compositions and methods for the diagnosis and Lieather of disorders involving anglogenesis and Lieather of Disorders involving anglogenesis Journal Patent: WO 0208284-A 29 31-JAN-2002; General March Connectech, Inc. (US); Baker, Kevin. P. (US); Ferrara, Napoleone (General Control Contro	(US); Gellowski, Paul J. (US); Gurney, Austin L. (US); Andrey (US); Godowski, Paul J. (US); Gurney, Austin L. (US); Hillan, Kenneth J. (US); Marsters, Scot A. (US); Pan, James (US); ; Paoni, Nicholas F. (US); Stephan, Jean-Philippe F. (US); in the control of th	Watenabe, Colid N. (US); Willtams, F. Mithey (US); Wood; Williams I. (US) Location/Qualifiers
Db 979 AATTCAATTGCAAGAGTGGGAGTAAATGACTTCTGTCCAACAGTGCCAAAGATGAAGAAA 1038	Qy 341 SerLeuTyrSerAlaileSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360	Qy 361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379 	RESULT 2 AX400320 LCCUS DEFINITION Sequence 1 from Patent EP1191101. ACCESSION AX400320.1 GI:21336501	_	REFERENCE 1 ABRET, R.P., Chen, J., Goddard, A., Gurney, A.L., Wood, W.I. and Yuan, J. TITLE Polypeptides and nucleic acids encoding the same JOURNAL Patent: EP 1191101-A 1 27-MAR-2002;	FEATURES Course 1. 2454 Source 1. 2454 /organism="Homo sapiens"	BASE COUNT 835 a 432 c 417 g 770 t ORIGIN	3.1e-166 Length: 1992.00 Matches: 100.00% Conservati	100.00% Mismacrnes: 100.00% Indels: 6 Gaps:	US-09-944-884-2 (1-379) x AX400320 (1-2454) Oy	ProSerHis II ealaLeuLysasnMetMetLeuLysaspMetGluaspThraspAspAsp	Oy 41 Aspaspaspaspaspaspaspaspaspaspaspaspaspas	Qy 61 ProargSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80	Qy 81 TyrSerargValValHisCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100	Oy 101 PheaspThrargMetLeuaspLeuGlnasnasnLysIleLysGlulleLysGlubasnasp 120	Qy 121 PheLysGlyLeuThrSerLeuTyrGlyLeuTleLeuAsnAsnAsnAsnLysLeuThrLysIle 140	Oy 141 HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160

	Oy 361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379	NISM NCE ORS	Same AL Patent: WO 0140466-A 327 07-JUN-2001, Genentech Inc. (US) Location/Qualifiers 1. 2454 1. 2454 Vorganism="Homo.sapiens" //db_ref="taxon:9606" nt Scores:	ila Sim : :		0.y Aspadasphsphsphsphsphsphspdspd1uabphspcflue0pherchirArgGlue0 0.y Aspadasphsphsphsphsphsphsphspdspd1uabphspcflue0pherchirArgGlue0 0.y
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AY029191 2466 bp mRNA linear PRI 15-OCT-2001 Qy Homo sapiens periodontal ligament associated protein 1 (PLAPI) mRNA, complete cds. Db	79 GlnCysTyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsn 98
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Nakahira, Y., Ikezawa, K., Takayama, S., Matsubara, R. and Okada, H. Expression profile of active genes in human periodontal ligament and isolation of PiAPP-1, a novel SLRP family gene	139 LysileHisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHis 158
	59 AsnGlnLeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgileHis
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Submitted (03-ARR-2001) Department of Periodontology, Osaka University Graduate School of Dentistry, 1-8 Yamadaoka, Suita, Db	179 GLUSSILVSVALLYSVALLYSLEGIRUYSASPINTREDYSLIPPELASALLYPRELASALALGEGURISVAL 198 [
Location/Qualifiers Oy	199 LeuGluMetSerAlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGly 218
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	99 LysLeuLysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeu 31

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HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160
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241 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe 260 [111111111111111111111111111111111111	341 SerLeutyrSerAlaileSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360	complete cds. BC034888 BC034881. GI:2202822. MGC. house mouse Mus musculus Eukaryota; Metazoa; Ch Mammalia; Eutheria; Rod	RS Strausberg, R. Direct Submission AL Submitted (29-30L-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA NIH-MGC Project URL: http://mgc.nci.nih.gov Contact: MGC help desk Email: cgapbs-r@mail.nih.gov Tissue Procurement: Marcello Bento Soares, Ph.D. CONA Library Preparation: Soares Laboratory CONA Library Arrayed by: The I.M.G.E. Consortium (LLNL) DNA Sequencing by: Genome Sequence Centre,	BC Cancer Agency, Vancouver, BC, Canada infoGeogsc.Dc.ca Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Duane Smallus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy, George Yang, Scott Zuyderduyn, Marco Marra.	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 67 Row: b Column: 17 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 13385169. S Location/Qualifiers urce 12325

REFERENCE AUTHORS TITLE JOURNAL

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                                                                                                                                                                                                                                                                                                                                 PRI 01-AUG-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Buteleostomi;
Catarrhini; Hominidae; Homo.
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                 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe
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clone HEMBB1001871,
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Homo sapiens embryo, 10 weeks whole embryo, mainly
mRNA, clone_lib:HEMBB1 clone:HEMBB1001871.
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to BONE/CARTILAGE PROTEOGLYCAN I PRECURSOR.
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AK027359.1 GI:14041982
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Direct Submission

Submitted (15-FEB-2000) Sumio Sugano, Institute of Medical Science
University of Tokyo, Deptment of Virology; Shirokane-dai, 4-6-1,
Minato-ku, Tokyo, 108-8639, Japan (E-mail:cdnal@ims.u-tokyo.ac.jp,
Tel:81-3549-5286, Fax:81-3-5449-5416)

NEDO human CDNA sequencing project supported by Ministry of
International Trade and Industry of Japan; CDNA full insert
sequencing: Research Association for Biotechnology; CDNA library
construction, S. & 3' end one pass sequencing: Departent of
Virology and Human Genome Center, Institute of Medical Science,
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            CACGITITIGGAAAIGAGIGCAAACCCITCIIGAIAAIAAIGGGAIAGAGCCAGGGGCCAITI
                                                                                           sGlyLeuProProThrLeuLeuGluLeuHisLeuAspTyrAsnLys1leSerThrValGl
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oligo capping; fis (full insert sequence).
Homo sapiens colon cDNA to mRNA, clone_11b:COL clone:COL06190
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Catarrhini; Hominidae;
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fis,
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Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                    /protein_id="BAA99967.1"
/db_xref="G1:7020027"
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/tissue_type="colon"
/clone_lib="col"
/ncte="cloning vector p
247. 810
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232 GAGATCTACCTGGACAACAACGTATGAGAAAGGTCCCACCTGGCCTTAGTTCCCTGCGC 1291
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                           443 CCAATCAATGTTATGGACTACCTGAAAACTATGACACAAAAATCCATGAAATCATGATA 502
                                                                                                                                                                                                                                                                                                                                                        LeuAsnAsnAsnLysLeuThrLysIleHisProLysAlaPheLeuThrThrLysLysLeu 151
                                                                                                                                                                                                                                                                                             32 LysaspMetGluAspThraspAspAspAspAspAspAspAspAspAspAspAspAspGlu
                                                                                                                52 AspAsnSerLeuPheProThrArgGluProArgSerHisPhePheProPheAspLeuPhe
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                                                                        572 GAGGACTGTCCAGCTCATTGTCATTGCTCAGCCAGAGTGGTGCAGTGCTCTGACCAGGGT
                                                                                                                                                                                                                                                 72 ProMetCysProPheGlyCysGlnCysTyrSerArgValValHisCysSerAspLeuGly
                                                                                                                                                                                                                                      LeuThrSerValProThrAsnIleProPheAspThrArgMetLeuAspLeuGlnAsnAsn
 ProSerHisIleAla-----LeuLysAsn
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dddddbruddddddnubcopahchcsprvvQcsdqGlisyPdkipedtvwidlQnn
DTfeIQQDDFKGLNKLYGLFLINNKISRIHPKAFKNDUNLELYLSYNMLNEIPANLP
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EAKLTSIPRDFYSITELSLDYNKISKVEIEDFIRXRNLQRGGLAFNQIKYVEGGS
NTPKIREIYLDNNRMRKVPPGLSSLRYLQVIFLHGNKISSVGINDFCPIRADSKKNPY
                                                                                                                                                                                          AF247821 1634 bp mRNA linear VRT 14-DEC-2000 Oreochromis niloticus biglycan-like protein 3 (BGL3) mRNA, complete
                                                                                                                                                                                                                                                                                                                            Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthoorerpai, Acanthopterygii; Percomorpha; Perciformes; Labroidei; Cichlidae; Oreochromis.

1 (bases 1 to 1634)

2 Abhitani, S., Safto, A., Toyosawa, S., O'hüigin,C. and Klein,J. Biglycan-like extracellular matrix genes of agnathans and teleosts J. Mol. Evol. 51 (4), 363-373 (2000)
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                TTCTGTCCAACAGTGCCAAAGATGAAGAAATCTTTATACAGTGCAATAAGTTTATTCAAC
42, Tubingen
                                                                                                                                                                                                                                                                                                                 Vertebrata;
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/organism="Oreochromis niloticus"
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/db_xref="GI-1176.1"
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Mismatches:
Indels:
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Eukaryota; Metazoa; Chordata; Craniata;
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Matches:
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386. .1498
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1118.50
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56.15$
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Shintani, S.
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AF247821.1
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1 (bases 1 to 1107)
Koops, A. and Hasenoehrl, R.D.
USE OF CHONDROITIN SULPHATE PROTEOGLYCANS FOR PROTECTION OF NEURONS
Patent: EP 0868397-A 1 13-DEC-1995;
BOEHRINGER MANNHEIM GMBH (DE)
Location/Qualifiers
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                                                                            133 snAsnAsnLysLeuThrLysIleHisProLysAlaPheLeuThrThrLysLysLeuArgA 153
                113 leLysGluIleLysGluAsnAspPheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuA 133
                                                                                                                                                        30 GCATCCCAAAAGGTCTTCCAAGCACCCTAAATGACCTTCACCTTGACAACAACAAGATCC
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KLSGTPKGLEPSTLNELHLDNNKIQATEKEDLSQYASLYRLGTCHNNIRNIENGSLSFM
VPRELHLDNNKLSKVPPGLPDMKLLQVVYLHSNNITQVGVNDFCPIGFGVKRAYYNG
ISLENNPVFWWEVQPATFRCPIDELAJQFGNYRK"
667 c 652 g 782 t
                                                                                                                                                                                                                Aenopodinae; Xenopus.

1 (bases 1 to 2960)
Goto.T. and Kubota,H.Y.

2 (bases 1 to 2960)
Briect Submission
Submitted (20-JAN-2000) Toshiyasu Goto, Graduate School of Science, Kyoto University, Department of Zoology; Sakyo-ku, Kyoto 606-8502, Pax:+81-75-753-4080)
                                                                             VRT 26-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="mkVLLLLCSCILVIHALPFEQRGFWDFSMDGMAMMKDEEASGV
GPIPTESIPDVGLPPMDLCPFGCQCHLRVVQCSDLGLTSIPKNLPKDTTLLDLQNNKI
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                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
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                                                                            2960 bp mRNA linear for biglycan, complete cds
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Matches:
Conservative:
Mismatches:
Indels:
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                                                                                                                                                                                                                                                                                                                                                                                                                                      organism~"Xenopus laevis"
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1. .2960
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                                                                                                                                                        Xenopus laevis cDNA to mRNA.
Xenopus laevis
1472 GTTCAGCTCGGAAACTTC 1489
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                                                                                        Xenopus laevis BGN mRNA
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74.57%
56.36%
52.48%
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266. .1372
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    Local Similarity:
Query Match:
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                                                                                        DEFINITION
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568 GAGATGGGTGGGAATCCCCTGGAGAACAGTGGCTTTGAACCCGGAGCCTTTGATGGCCTG 627
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (29-NOV-1994) Asundi V. K., Weis Center for Research,
Geisinger Clinic (26-13), 100 North Academy Avenue, Danville, PA
17822-2613, USA
On Dec 9, 1994 this sequence version replaced gi:600174.
                                                   628 AAGCTCAACTGCCGCATCTCAGAGGCCAAGCTCACTGGCATCCCCAAAGATCTCCCT
                                                                                                      240 ProThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAsp
                                                                                                                      260 PheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIle
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                                   ThrValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuPro
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123. .1232
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Rattus norvegicus biglycan mRNA, complete cds.
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                                                                                                                                        /translation="MRPLMLITLLALSQALPFEQKGFWDFTLDDGLLMMNDEBASGS
DTTSGVPDLDSLTPTFSAMCPFGCHCHLRVVQCSDLGLKTVPKEISPDTTLLDLQNND
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AKLTGIPKDLPETLNELHLDHNKIQAIELEDLLRYSKLYRLGLGHNQIRMIENGSLSF
LPTLRELHLDNNKLSRVPAGLPDLKLLQVVYLHSNNITKVGINDFCPMGFGVKRAYYN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 TCACCTGATACCACACTGCTAGAACAATGACATGACATCTCTGAACTCCGCAAGGAT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 AspPheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLys 139
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Mismatches:
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                                                                                                       /protein_id="CAB58703.1"
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/product="unnamed"
a 329 c 264 g
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1040.50
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AKLTGIPKDLPETLAREHLDHNKIQALELEDLLRYSKLYRLGLGHNOIRMIENGSLSF
LPTLRELHLDNNKLSRVPAGLPDLKLLQVYLHSNNITKVGINDFCPMGFGVKRAYYN
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1 609 c 421 g 508 L
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Matches:
Conservative:
Mismatches:
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260 PheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIle 279	982 CTACTICGATACTCCAAGCTGTACGTTGGGCTTAGGTCACAATCAGATTCGGATGATT 1041	280 GluAsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLys 299	-	300 LeuLysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHis 319	1102 CTGTCCCGGGTGCCTGCCTGCCTCCCAGATCTCAAGCTCCTCCAGGTTGTCTATCTGCAC 1161		TCCAACAACATCACCAAGGTGGGCATCAATGACTTCTGTCCTATGGGCTTCGGA	-	AGGCCTACTATAATGGCATCACCTCTTCAACAACCCTGTGCCCTACTGGGAAGTGCAG 1281	360 ProAlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPhe 377	1282 CCTGCCACCTTCCGCTTACTGACCGCCTGGCCATCCAATTTGGAAATTAT 1335
260	982	280	1042	300	1102	320	1162	340	1222	360	1282
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Search completed: May 31, 2003, 16:40:04 Job time: 3293 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - nuc	ОМ protein - nucleic search, using frame_plus_p2n model	
Run on:	<pre>May 31, 2003, 13:44:02 ; Search time 1779 Seconds (without alignments) 3450.303 Million cell updates/sec</pre>	
Title: Perfect score: Sequence:	US-09-944-884-2 1992 1 MKEYVLLIFLALCSAKPFFSPATFRCVLSRMSVQLGNFGM 379	
Scoring table:		
)	Ygapop 10.0 , Ygapext 0.5 . Fgapop 6.0 , Fgapext 7.0 Delop 6.0 , Delext 7.0	
Searched:	16154066 seqs, 8097743376 residues	
Total number of	Total number of hits satisfying chosen parameters: 32308132	
Minimum DB seq 1 Maximum DB seq 1	Minimum DB seq length: 0 Maximum DB seq length: 2000000000	
Post-processing:	Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries	

Command line parameters:
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-Q-/cqn2_1/USPTO_spool/US09944884/runat_27052003_150250_7733/app_query.fasta_1.519
-DB-EST -QFWT=fastap -SUFTX=p2n.rest -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UBRITS-bits -STARR=1 -ERD=-1 -MARRIX=blosum62 -FRANS=human40.cdi -LIST=45
-UNITS-bits -STARR=1 -ERD=-1 -MARRIX=10.0 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-GOTFMT=pcr -NORM=ext -HERDESIZE=500 -MINLEN-0 -MAXIZEN-200000000
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-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

boase : EST::*

2: em_esthum:*

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11: gb_est1:*

12: gb_est3:*

13: gb_est3:*

14: gb_est3:*

15: em_estfun:*

16: em_estom:*

17: gb_est3:*

18: em_gst4:*

19: em_gss_hum:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Encyclopedia project of Genome Exploration Research Group in Riken Encyclopedia. Project of Genome Exploration Research Group in Riken Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. First strand cDNA was primed with a primer 15' AGGAGAGAGAGAGAGAGACTTTTTTTTTTTTTTTYN 3'], cDNA was and subsequently enriched for full-length by cap-trapper. CDNA went through one round of normalization to Rot = 10.0 and subtraction to adapter of sequence [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MKEYVMLLLLAVCSAKPFFSPSHTALKNMMLKDMEDTDDDDNDD
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QNNKIKEIKENDFKGLTSLYALILNNNKLTKIHPKTFLTTKKLRRLYLSHNQLSEIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="skin"
/clone_lib>"RIKEN full-length enriched mouse cDNA library"
/dev_stage="0 day neonate"
1. .2302
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       Please visit our web site (http://genome.gsc.riken.go.jp/)
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Conservative:
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/db_xref="taxon:10090"
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Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Alzawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
Saito,T., Okazahi,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R.,
Radota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T.,
Fleischman,W., Gasterland,T., Gissi,C., King,B., Kochiwa,H.,
Kuehl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesolo,G., Tomita,M.,
Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,
Baldarelli,R., Barsh,G., Blake,J., Boffelli,D., Bojunga,N.,
Carninci,P., de Bonaldo,M., Brownstein,M.J., Bult,C.,
Fletcher,C., Fujita,M., Gariboldi,M., Gustincich,S., Hill,D.,
Marchionni,L., Mashim,J., Mazzarelli,J., Mombaerts,P., Nordone,P.,
Ring,B., Ringwald,M., Rodriguez,I., Sakamoto,N., Sasaki,H.,
Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
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                                                                                                                                                                                                               Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., wuramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. Sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.
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Nature 409 (6821), 685-690 (2001)
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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                                                                                                                                                                          LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200
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                                                                        PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140
                                                                                                                                                 LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsn 180
                                            CCAGTGAACCCTTTTTCCCTTTCGATTTCTTACCAACATGTCCATTTGGGTGCCAATGT 476
                                                                                                    PheaspThrargMetLeuAspLeuGlnAsnAsnLysIleLysGluIleLysGluAsnAsp 120
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                            AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGly 378
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linear EST 21-AUG-2002 CDNA clone IMAGE:6313764

mRNA musculus

BQ960688 926 bp AGENCOURT_8840778 NIH_MGC_129 Mus 5', mRNA sequence. BQ960688

DEFINITION

BQ960688

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/clone_lib="NIH_MGC_129"
/lab_host-"DH10B (phage-resistant)"
/note="Organ: olfactory epithelium; Vector:
pCMV-SPORT6.1.cdb; Site_1: EcoRV; Site_2: Not1; Cloned
unidirectionally Primer: Oligo dT. Average insert size
unidirectionally ResGen, Invitrogen Corp. Note: this
is a NIH_MGC_library."
194 c 171 g 272 t 2 others
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                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
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                                                                             National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                     Email: capbs remail.nih.gov
Tissue Procurement: Susan L. Sullivan, PhD.
Tissue Procurement: Susan L. Sullivan, PhD.
CDNA Library Preparation: ResGen, Invitrogen Corp
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC Clone distribution information can thetp://image.llnl.gov
http://image.llnl.gov
Plate: LLAMI3741 row: g column: 13
High quality sequence stop: 710.
High quality sequence stop: 710.
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Mismatches:
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                                                                                                                           Contact: Robert Strausberg, Ph.D.
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/clone="IMAGE:6313764"
                                                                           NIH-MGC http://mgc.nci.nih.gov/
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                           Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Rodentia,
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87.95%
55.82%
                musculus
 house mouse.
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Score: 1035.50 Percent Similarity: 96.43% Best Local Similarity: 95.09% Query Match: 51.98% DB: 10	US-09-944-884-2 (1-379) x AW608G	Qy 80 CysTyrSerArgvalVal	Qy 99 eProPheAspThrArgMe		139	Oy 159 nGlnLeuSerGlullePr 	Oy 179 UASDLYSUALLYSTI 	Oy 199 uGluMetSerAlaAsnPr 	Oy 219 IThrValPheHisIleAr 	Oy 239 oProThrLeuLeuGluLe	Oy 259 pPhetysargTyrLysGl	Oy 299 sLeuLyslys 302 	RESULT 4 AL598934 LOCUS DEFINITION DKFZp313F1523_rl	ACCESSION ALS9834.1 G VERSION ALS98934.1 G KEYWORDS EST. SOURCE human SOURCE human sapiens ERRANGENER Homo sapiens ERRANGENER ERRANGENER	REFERENCE
141 HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160 	LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArglleHisGluAsn 180 	1LysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200 	MetSerAlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThr 220 		rr 249 :: :T 920	C a series of the series of th	ogs by mrna linear Est 25-mar 2000 10 LT0023 Homo sapiens CDNA, mRNA sequence.	. Vertebrata; E	es; Catarrhini; Hominidae; Homo. .br/ORESTES. er Genome Project	ss Research 109, 4 andar, 01509-010, sao Paulo-SP,	SSP/LICR Human Cancer Ge following URL ml2.pl?tl=RC3&t2=RC3-LT	. 13 . 13 . 534.	otens" 16"	/dev_stage="Adult" //note="Organ: leionios; Vector: puc18; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under	170 t
141 HisProLysalaPheLeuThrThrLy 	161 LeuSerGluIleProLeuAsnLeuPr 	181 LysValLysLysljeGlnLysAspTh 	201 MetSerAlaAsnProLeuAspAsnAs 	ValPP GTATT	241 ThrLeuLeuGluLeuHisLeuAspTyr 		AW608047 AW608047 AW608047 GI:7312788	EST. human. Homo sapiens Eukaryota; Metazoa;	Mammalia; Eutheria; 1 (bases 1 to 695) HCGP http://www.ludw The FAPESP/LICR Huma	Contact: Simpson A.J.G. Laboratory of Cancer Genetic Ludwig Institute for Cancer Rua Prof. Antonio Prudente	Brazil Tel: +55-11-2704922 Fax: +55-11-2707001 Faxis saimpson@ludwig.org.br This sequence was derived from the FAPESP/LICR Human Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=RC36	Seq primer: puc 18 forward High quality sequence start: High quality sequence start: Location/Oualiflers		/dew_Stage=-Adult" /note="Organ: leion Site_2: Smal; A mir derived from OREST No. 196,716 - Ludw profiles into the tissue mRNA and obt	2
ΟΥ Db	oy G	Qy	Oy Db	oy qa	ο λο	RESULT 3	DEFINITION ACCESSION VERSION	KEIWOKDS SOURCE ORGANISM	REFERENCE AUTHORS TITLE	COMMENT		FEATURES	source		BASE COUNT

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553 bp mRNA linear EST 14-AUG-2001
13 (synonym: hlcc2) Homo sapiens cDNA clone
mRNA sequence.
                                                                                                                                                                                                                                                               ArgileAlaGluAlaLysLeuThrSerValProLysGlyLeuPr 239
                                                                                                                                                                                                                                                                                                                                ProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGl 179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          r,D., Mewes,W., Weil,B. and Wiemann,S.
eubner,D., Mewes,H.W., Weil,B. and Wiemann,S.)
213
3
6
      Conservative:
Mismatches:
Indels:
Matches:
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Contact: Wambutt R
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6, 14059
                                                                                                                                                                                               /note="Vector: pTriplEx2; Site_1: SfilA; Site_2: SfilB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKFZ); Enails s.wiemann@dkfz-heidelberg.de; sequenced by AcoWA (Berlin/Germany) within the cDNA sequencing consortium of the German Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No s1 sequence available.
This clone (DKFzp313F1523) is available at the RZPD in Please contact the RZPD: Ressourcenzentrum, Heubnerweg Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de. Location/Qualifiers
MIPS
Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
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/db_xref="taxon:9606"
/clone="lkPZp313F1523"
/dow_stage="adult"
/lab_host="DH108"
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BF164270 1159 bp mRNA linear EST 30-OCT-2000 601773027F1 NCI_CGAP_Lu29 Mus musculus cDNA clone IMAGE:3992071 5',
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                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
Tissue Procurement: Gilbert Smith, Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MG.C. clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9206 row: f column: 08
High quality sequence stop: 544.
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1.to 1159)
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/clone="IMAGE:3992071"
/clone_lib="NOI_CGAP_Lu29"
/tissue_type="spontaneous tumor, metastatic to mammary.
/lab_host="DH10B"
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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/strain="CZECH II"
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CCAAACAACATTCCATTTGATACTCGAATGGTTGACCTTCAAAATAATAAAATCAAGGAA
                                                                                             AAGCTAACAAAGATTCACCCAAAAACCTTTCTAACCACAAAGAAATCGAGAAGGCTATAT
                                                                                                                   LeuSerHisAsnGlnLeuSerGlu-IleProLeuAsn-LeuProLysSerLeuAlaGluL
                                                                                                                                                                  euArgIleHisGluAsnLysValLysLysIleGlnLysAspThrPheLysGlyMetAsnA
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Sciurognathi; Muridae; Murinae;
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National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCTGGCAACACAGAACTCCAGATTATGGAAACGGGACA----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     641 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601225391F1 NCI_CGAP_Mam1 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --LysLysIleProSerGlyLeu----
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BE374603
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                                                                                                                                                                                                                                                                                                                               /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"

117 c 131 g 162 t 1 others
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPheLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262 ArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIleGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeuLys
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                              DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/ELNL at:
http://image.llnl.gov
Plate: LLAMB740 row: f column: 23
High quality sequence stop: 602.
Location/Qualifiers
cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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189
12
10
5
                                                                                                                                                                                                                                          /clone_lib="MCI_CGAP_Mam1"
/tissue_type="tumor, blopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
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Gaps:
                                                                                                                                                                                  /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                                                                                      /db_xref-"taxon:10090"
                                                                                                                                                                                                                                        /clone="IMAGE:3583510"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-944-884-2 (1-379) x BE374603 (1-641)
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94.37%
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45.78%
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Best Local Similarity:
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BQ882271
AGENCOURT_7982177 Lupski_dorsal_root_ganglion Homo sapiens cDNA
clone_IMAGE:6186197 5', mRNA sequence.
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                                                                                                                                           106
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                                                                                                                                                                                                                                                                                      223
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                                 51 GluAspAsnSerLeuPheProThrArgGluProArgSerHisPhePheProPheAspLeu
                                                                                                                                                                                                                                                      71 PheProMetCysProPheGlyCysGlnCysTyrSerArgValValHisCysSerAspLeu
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-remail.nih.gov
Tissue Procurement: Dr. James R. Lupski
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 936)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 637
Location/Qualifiers
US-09-944-884-2 (1-379) x AI006670 (1-568)
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   541 TITATACAGTGCAATAAGTTTATTCAACAACCCAATGAAGTACTGGGAAATACA-CCTGC 599
                                                                                                                                                                                                                                                                                              Mus musculus
Subaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 568)
                                                                                                                                             AI006670 568 bp mRNA linear EST 12-JUN-1 uel6b10.yl Sugano mouse embryo mewa Mus musculus cDNA clone IMAGE:1480507 5' similar to SW.PGS1.HUMAN P21810 BONE/CARTILAGE PROTEGGLYCAN I PRECURSOR; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Vector: pME185-FL3; Site_1: DraIII (CACTGTGTG); Site_2: DraIII (CACCATGTG); 1st strand cDNA was primed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashG-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Possible reversed clone: similarity on wrong strand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:1480507"
/clone_lib="Sugano mouse embryo mewa"
/dev_stage="embryo, 14 dpc"
/lab_host="DH108"
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172
7
10
6
                                       361 aThrPheArgCysValLeuSerArgMetSerValGln 373
                                                                       600 A --- CATTCGTGTGTTCTGG -- CGAATGAGTGTCCCAG 631
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Mismatches:
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High quality sequence stop: 371.
Location/Qualifiers
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Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                             house mouse:
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                                                                                                           RESULT 7
AIOO6670
LOCUS
DEFINITION
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VERSION
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nRNA linear EST 14-AUG-2001
hlcc2) Homo sapiens cDNA clone
sTyrTrpGluMetGlnProAlaThrPheArgCysValLeuSerArgMetSerValGlnLe 374
                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 592)
Wambutt,R., Heubner,D., Mewes,W., Weil,B. and Wiemann,S.
EST (Wambutt,R., Heubner,D., Mewes,H.W., Weil,B. and Wiemann,S.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Vector: prriplEx2; Site_1: SfiIA; Site_2: SfiIB; cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz-heidelberg.de;
sequenced by AGOWA (Berlin/Germany) within the cDNA sequencing
consortium of the German Genome Project.
                                                               335 ValProLysMetLysLysSerLeuTyrSerAlalleSerLeuPheAsnAsnProVal-Ly
                                                                                  722 GGCTTCGGGGTGAAGCGGCCTACAACGCCATCAGCCTCTTCAACAACCCGTGGCC
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/clone="nkrzpal380538"
/clone_lib="313 (synonym: hlcc2)"
/dev_stage="adult"
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Conservative:
Mismatches:
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/organism="Homo sapiens"
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DKFZp313E0538 5', mRNA sequence.
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AL600795.1 GI:15164301
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                                                                                /note="Vector: DCMV-SPORT6 (Life Technologies); Site_1: NotI; Site_2: SalI; CDNA made by oligo-dT priming. Directionally cloned using the following adaptors: 5'-TGARCCACGGTCGG-3' and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 TACATCTCCAAGAACCACCTGGTGGAGATCCCGCCCAACCTACCCAGCTCCCTGGTGGAG
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164
55
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Matches:
Conservative:
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Berlin. 6, 14059

111 CCTTCACACTCCACACTCAAAATATGATGCTCAAGGATATGAAGACACACATGAAGACACACTCACACACA	BASE COUNT 198 a 280 c 213 g 147 t 1 others	ent Scores:	8.14e-88 Length: 822.00 Matches: 78.11% Conservative:	N 4 0	US-09-944-884-2 (1-379) x BQ942694 (1-839)	Qy 73 MetCysProPheGlyCysGlnCysTyrSerArgValHisCysSerAspLeuGlyLeu 92	Qy 93 ThrSerValProThrAsnIleProPheAspThrArgMetLeuAspLeuGlaAsnAsnLys 112	Qy 113 IleLysGlulleLysGluAsnAspPheLysGlyLeuThrSerLeuTyrGlyLeuIleLeu 132 	Oy 133 AsnAsnAsnLysLeuThrLysIleHisProLysAlaPheLeuThrThrLysLysLeuArg 152		173	193	213	Qy 233 SerValProLysGlyLeuProProThrLeuLeuGluLeuHisLeuAspTyrAsnLysIle 252 :::	Oy 253 SerThrValGluLeuGluAspPheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGly 272 :::	Oy 273 ASNASNLYSITETHRASPITEGLUASNGTYSETLEUALAASNITEProArgValArgGlu 292 ::: :::	Oy 293 IleHisLeuGluAsnAsnLysLeuLysLysIle-ProSerGlyLeuProGluLeuLysTy 312 :::	Oy 312 rLeuGln-IleIlePheLeuHisSerAsnSerIleAla-ArgValGlyValAsnAsp-Ph 331	331	SULT 11 78337 CUS AI789337 FINITION UK53H09.y1 S
直接 12 从大观众之,就是许见失。 《点》	CCTTCACACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGATGAT 24			36	TyrSerArgvalValHiSCySSerAspLeuGlyLeuThrSerValProThrAsnIlePro 			TTTAAAGGACTCACTTTATGGTCTGATCCTGAACAACAACAACGTAACGAAGTT HisProLysalaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSer 157	541 CACCCAAAAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCC 591 0	BQ942694 8745224 Lupski_sciatic_nerve Homo sapiens cDNA cl INAGE:e205396 5', mRNA sequence.	Σ	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleo Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. I bases I to 839)	National Institutes of Health, Mammalian Gene Collection (Unpublished (1999) Contact: Robert Strausberg, Ph.D. Email: cqapbs-refmail.nih.qov		Ā c	S	atic_nerv	e		primar primar fe . (Bayl

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AL568847 LTI_FL002_PL1 Homo sapiens CDNA clone CSODEO06XI04 3 prime
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Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                        255 ValGluLeuGluAspPheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsn
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BP 191 91006 EVRY cedex - France
Emall: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Organ: Kidney; Vector: pME18S-FL3; Site_1: DraIII (CACCATGTG); 1st strand cDNA was primed with an oligo(dT) primer stranded cDNA was primed with an oligo(dT) primer stranded cDNA was primed with an oligo(dT) primer stranded cDNA was late_1 and cloned into distinct braIII sites of the PME18S-FL3 vector (5' site CACTGTGTG, 3' site CACCATGTG). Algested be used to isolate the cDNA insert. Size selection was performed to exclude fragments <1.5kb. Library constructed by Dr. Sumio Sugano (University of TOY Institute of Medical Science). Custom primers for sequencing: 5' end primer CTTCTGCTCTAAAAGCTGCG and 3' end primer CGACCTGCAGCAGCAC." Il others
IMAGE:1972769 5' similar to gb:J04599 BONE/CARTILAGE PROTEOGLYCAN I
PRECURSOR (HUMAN); gb:L20276 Mouse biglycan (MOUSE);, mRNA
                                                                                                                                                                                      1 (bases 1 to 865)
Whatra, M. Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., The Washu-NCI Mouse EST Project 1999
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                              Contact: Marra M.Washu-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone_lib="Sugano mouse kidney mkia"
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147
55
60
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Matches:
Conservative:
Mismatches:
Indels:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: custom primer used
High quality sequence stop: 513
Location/Qualifiers
1. 865
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/clone="IMAGE:1972769"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="adult"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="C57BL"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.58e-87
818.00
77.10%
56.11%
                                                                                                                                  Mus musculus
                                                                                                                  house mouse.
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Best Local Similarity:
Query Match:
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                                                                                                            SOURCE
ORGANISM
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JOURNAL
COMMENT
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ORIGIN
                                                      ACCESSION
VERSION
KEYWORDS
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was primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pcWvSpoRT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact: Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax: (1) 301 610 8371
Email: fliang@lifetech.com URL:
http://fullength.invitrogen.com"
3 others
                                                                                                                                                                                                                                                                                        AL571404 LII_NFL006_PL2 Homo sapiens CDNA clone CS0D1023YG19 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspLeuGlnAsnAsnLysIleLysGluIleLysGluAsnAspPheLysGlyLeuThrSer 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGlnLeuSerGluIleProLeu 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi;
Primates; Catarrhini; Hominidae; Homo.
                           CCTTTGCTGAAGTTGGAACGACTTTATCTGTCCAAGAATCAGCTGAAGGAATTGCCAGAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerLeuPheAsnAsnProValLysTyrTrpGluMetGlnProAlaThrPheArgCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : www.genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 879) Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 FYRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.
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Matches:
Conservative:
Mismatches:
                                                                                                                                                214 TACGTGCGCTCTGCCATTCAACTCGGAAACTAT 182
                                                                                                                     367 LeuSerArgMetSerValGlnLeuGlyAsnPhe 377
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.804.50
75.00%
54.78%
                                                                                                                                                                                                                                                                                                                                                prime, mRNA sequence.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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KEYWORDS
SOURCE
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                                                    Anote—Norgan: placenta; Vector: pCMVSPORT 6; 1st strand CDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was constructed by Life Technologies. Contact: Frequ Liang Life Technologies. Contact: Frequ Liang Life Technologies. and division of Invitrogen 9800 Medical Center Drive Rockville Maryland 20850, USA Fax: (1) 301 610 8371 Email: http://fulllangelifetech.com URL:

1 195 c 22 g 315 t 8 others
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33 CACGCATTGATTCTTKTCAACAATAAAATTAGCAAAGTTAGTCCTKGAGCATTTACACCT 875
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 994 CTGCAAAACAACAAATAAACGGAAATCAAAGATGGAGACTTTAAGAACCTGAAGAACCTT 935
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSerAsnSerIleAlaArgVal 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyvalAsnAspPheCysProThrValProLysMetLysLysSerLeuTyrSerAlaIle 346
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149
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66
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Matches:
Conservative:
Mismatches:
   /clone_lib="LTI_FL002_PL1"
/lab_host="DH10B"
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iecnnologies. Contact : Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax : (1) 301 610 8371 Email : fliang@lifetech.com URL : http://fullength.invitrogen.com"

231 c 203 a
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                                                 206
                                                                                                               AspAsnAsnGlyIleGluProGlyAlaPheGluGlyVal---ThrValPheHisIleArg 225
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Catarrhini; Hominidae; Homo.
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Mammalia; Eutheria; Primates; Catarrhini; Hon
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www
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/lab_host="DH108"
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203 AlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThrValPhe 222
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                 243 TACCTGCGCATCTCAGAGGCCAAGGTGACTGGCATCCCCAAAGACCTCCCTGAGACCTG
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                                                                                                      AGENCOURT_1976210 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6214605 BQ708510
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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National Institutes of Health, Mammalian Gene Collection (MGC)
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CDNA Library Arrayed by: The I.M. A.G.E. Consortium (LLNL)
MAS Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
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Tissue Procurement: Dr. Mark Watson
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                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
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/db_xref="taxon:9606"
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High quality sequence stop: 663.
Location/Qualifiers
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KEYWORDS SOURCE	human	an.						
ORGANISM		Homo sapiens Eukaryota; M Mammalia; Eu	ens ; Metazoa; Eutheria;	oa; ia;	Chordata; Cran Primates; Cata	Craniata; Ve Catarrhini;	Vertebrata; ; Hominidae;	Euteleostomi; ; Homo.
REFERENCE AUTHORS	i Bak	er,K.P	1 Baker, K.P., Chen, J., opposites and nucl	, T.,	Goddard, A., Gurney	urney,A.L	L., Wood,W	W.I. and Yuan, J.
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OY 2281 ATAACTCTGAGAAACACATCTAGTATAACTGAATAAGCAGACATCAAATTAAACAGACA 2340	RESULT 3 AX464194 LOCUS AX464194 LOCUS DEFINITION Sequence 327 from Patent WOO140466. ACCESSION AX464194 VERSION AX464194 KEYWORDS HUMAN ORGANISM HOMO Sapiens CORGANISM HOMO Sapiens DEMAINGATION HOMO Sapiens DEMAINGATION MARMANIA ELAZOA; Chordata; Craniata; Vertebrata; Buteleostomi; Manmania; Eutheria; Primates; Catarrhini; Hominidae; Homo.	REFERENCE RATHORS Baker, K. P., Beresini, M., Deforge, L., Desnoyers, L., Filvaroff, E., AUTHORS Baker, K. P., Beresini, M. E., Goddard, A., Godowski, P. J., Gurney, A. L., Sherwood, S., Smith, V., Stewart, T. A., Tumas, D., Watanabe, C. K., Wood, W. L. and Zhang, Z. TITLE Secreted and transmembrane polypeptides and nucleic acids encoding same JOURNAL Patent: WO 0140466-A 327 07-JUN-2001; Genetech Inc. (US) FEATURES Location/Qualifiers	Source 1434 // Corganism="Homo sapiens" // Ab_xref="taxon:9606" // Ab_xref="taxon:9606"	0y 1 GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCCCAGGGTGCAGCCACCCAGGACT 60	181 GGAGGACTACTCTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGG 24 18. 18. 18. 18. 18. 18. 18. 18. 18. 18.
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Godowski,P.J., Gurney,A.L., Hillan,K.J., Marsters,S.A., Pan,J.,
Pagni,N.F., Stephan,J.P., Watanabe,C.K., Williams,P.M., Wood,W.I.
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Nirect Submission
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University Graduate School of Dentistry, 1-8 Yamadaoka,
Osaka 565-0871, Japan
Location/Qualifiers
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g	QV .	oy QO	oy Oy	QJ Dp	Qy Dp	oy Op	qq .	Qy	cy GD	RESULT 6 AK000136 LOCUS	DEFINITION ACCESSION VERSION KEYWORDS	SOURCE ORGANISM	REFERENCE AUTHORS	TITLE JOURNAL REFERENCE AUTHORS	TITLE JOURNAL	COMMENT	FEATURES	
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	21 AACCCGGTGAAATACTGGGAAATGCAACCTGCCAACATTTCGTTGTGTTTTGAGCAGAATG /80	1344 AGTGTTCAGCTTGGBACTTTGGBATCTBATTAGTTATTTGTTAATTGTTAATT 1403 	04 TAAGAT 	₩ ~	1524 ATTTCAACGGAATTTTGCCAAACTATTGATACATAAGGGGTTGAGAGAAACAAGCATCTA 1583 	1584 TIGCAGITICCTITITGCGTACAAATGATCTTACATAAATCTCATGCTTGACCATTCCTT 1643 	1644 TCTTCAFAACAAAAAGTAAGAFATTCGGTATTTAACACTTTGTTATCAAGCACATTTA 1703 1079 TCTTCAFAACAAAAAGAFAATTCGGTATTTAACACTTTGTFATCAAGCACATTTA 1138	AAAAGAACTGTAAAATGGAATGCTTGACTTAGCAAAATTTGTGCTCTTTCATTTGC 1 	4 TGTTAGAAAACAGAATTAACAAAGACAGTAATGTGAAGAGTGCATTACACTATTCTTAT 182. 	1824 TCTTTAGTAACTTGGGTAGTACTGTAATATTTTAATCATCTTAAAGTATGATTTGATAT 188 : ILB : IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	1884 AATCTTATTGAAATTACCTTATCATGTCTTAGAGCCCGTCTTTATGTTTAAAACTAATTT 1943 	1944 CTTAAAATAAGCCTTCAGTAAATGTTCATTACCAACTTGATAAATGCTACTCATAAGAG 2003	CTGGTTTGGGGCTATAGCATATGCTTTTTTTTTTAATTATTACTGATTTAAAAATCT 206	212 155	3 218 1 3 161	2184 AATATTTTGAGATATCCCTTTGGAAGACCTTGGTAGGAGAGCCTGGACACTAACAATT 2243	2244 CTACACCAAATTGTCTCTTCAAATACGTATGGACTGGATAACTCTGAGAAACACATCTAG 2303 1679 CTACACCAAATTGTCTTTCAAATACGTATGGACTGGATAACTCTGAGAAACACATCTAG 1738	2304 TATAACTGAATAAGCAGAGCATCAAATTAAACAGAGAAACCGAAAGCTCTATATAAAT 2363 1139 TATAACTGAATAAGCAGCATCAAATTAAACAGAAACGGAAAGCTCTATATAAAT 1799	2364 GCTCAGAGTTCTTTATGTATTTCTTATTGGCATTCAACATATGTAAAATCAGAAAACAG 2423
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	806	1331	1391	1451	1511	1571	1631	1691	175	1811	1871	1931	1991	2051	2111	2171	2231	1926	235
	g	Qy Dp	QY	Oy Dp	oy do	', <u>ਰ</u>	Qy Dp	QY Dp	δ da	o da	Qy Dp	Qy Db	: .	Qy Dp	Qy	Qy Db	Qy Dp	Oy Dp	do .

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ouly a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em1. EMBL: Sw.; SWISSPROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP thtp://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 9. Constructed by the Sanger Centre Chromosome 9 Mapping
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
Submitted (10-JAN-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
On Jan 11, 2002 this sequence version replaced gi:9230935.
During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with
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RP11-77D6 is from the library RPCI-11.1 constructed by the group of Pieter de Jong. For further details see http://www.chori.org/bacpac/home.htm
                                                                                                                                                                                                                                                                AL137848 110-JAN-2002 Human DNA sequence from clone RPI1-77b6 on chromosome 9q31.1-32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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restriction digest data." 42877 a 29058 c 29849 g 50557 t
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/db_xref="taxon:9606"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1184)
Lorenzo, P., Aspberg, A., Onnerfjord, P., Bayliss, M.T., Neame, P.J. and
Heinegard, D.
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TRMLDLQNRIKETRENDFKGLTSLYGLILNNRLYRIHPKAPLTTRKLRRLYLSHNO
LSEIPLMLPKSLAELRIHBWVKKIQKDFFKGMNALHVLEMSANPLDNNGIEPGAFG
VYTFHIR RABAKLTSVFKGLPPTLLELHLDYRKISTVELEDFKRYKELQRLGFLGNNKI
TDIENGSLANIPRYREIHLENNKLKKIPSGLPELKYLQIIFHNSIRRYGVNDFCPT
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                                  99796 GAGATATCCCTTTGGAAGACCTTGCTTGGAAGAGCCTGGACACTAACAATTCTACAA
                                                                                                                           99676 ATAAGCAGAGCATCAAATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGT
                                                                                              ATAACCAGACCATCAAATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGT
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leucine-rich repeat protein"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                               Homo sapiens asporin precursor (ASPN) mRNA, complete cds
AF316824
AF316824.1 GI:13625796
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Submitted (26-OCT-2000) Cell and Molecular Biology,
University, BMC plan Cl2, Lund SE-221 84, Sweden
Location/Qualifiers
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J. Biol. Chem. 276 (15), 12201-12211 (2001)
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/db_xref="taxon:9606"
/chromosome="9"
/map="9931.1-932"
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/gene="ASPN"
/product="asporin"
178. .180
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                                                1173 CAGATAATCTTCCTTCATTCTAATTCAATTGCAAGAGTGGGAGTAAATGACTTCTGTCCA 1232
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Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL.at: http://image.llnl.gov Series: IRAR Plate: 67 Row: b Column: 17
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 13385169.
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Sciurognathi; Muridae; Murinae; Mus
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Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                         AAAATCACAGATATCGAAAATGGGAGTCTTGCTAACATACCACGTGTGAGAGAAATACAT
                                                                                    TTGGAAAACAATAAACTAAAAAAAATCCCTTCAGGATTACCAGAGTTGAAATACCTCCAG
                                                                                                                                                        ATAATCTTCCTTCATTCTAATTCAATTGCAAGAGTGGGAGTAAATGACTTCTGTCCAACA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: MGC help desk
Email: cgapbs-rémail.inh.gov
Tissue Procurement: Marcello Bento Soares, Ph.D.
cDNA Library Preparation: Soares Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
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Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Rodentia,
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Direct Submission
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       /note="0-linked glycosylation"
order(238. .240,277. .279)
/gene="ASPN"
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order(1012. .1014,1111. .1113)
/gene="ASPN"
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TTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTCATTCTAATTCAATTGCAAGAGTG
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                                                     GCAGAAGCAAAACTGACTCAGTTCCTAAAGGCTTACCACCAACTTTATTGGAGCTTCAC
                                                                                              GATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGACGGTGTTCCATATCAGAATT
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/translation="MKEYWILLLAVCSAKPFFSPSHTALKNMMLKDMEDTDDDDNDD
DDNSLFPTKEPVNFFFFDLEFTCFFCCQCYSRVVHCSDLGITSVPNNIPFDFRWVDL
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ONNKIKEIKENDFKGLTSLYALILNNNKLTKIHPKTFLTTKKLRRLYLSHNQLSEIPL
                                                                                                                                                                                                                                 NIPKSLAELRIHDNKVKKIOKDTFKGMNALHVLEMSANPLENNGIEPGAFEGVTVFHI
RIAEKLTSIPKGLPPTLLELHLDFNKISTVELEDLKRYRELQRLGKGNNRITDIENG
FRANIPKNREIHLEHNKLKIPSGLQELKYLQIIFLHYNSIAKVGVNDFCPTVPKMKK
SLYSAISLENNPWYREIQPPFFCVLGRMSVQLGNVGK"
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                                                                                                                                                                                                                                                                                                                                                          154;
                                                                                                                                                                                                                                                                                                                                                         424; Indels
                                /clone="NGC:41375 IMAGE:1365428"
/tissue_type="Wammary gland"
/clone_lib="Soares_mammary_gland_NbMMG"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                          Score 1122.6; DB 10;
Pred. No. 5.1e-198;
0; Mismatches 424; In
                                                                                           /note="Vector: pT7T3D-Pac"
201. .1322
                                                                                                                                     /product="asporin"
/protein_id="AAH34888.1"
/db_xref="GI:22028225"
 /organism="Mus musculus"
/db_xref="taxon:10090"
                         /map="C57BL/6J
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Best Local Similarity 88.0
Matches 1011; Conservative
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Lorenzo, P., Aspberg, A., Onnerfjord, P., Bayliss, M.T., Neame, P.J. and Heinegard, D.
                       AGTATGATTTGATATAATCTTATTGAAATTACCTTATCATGTCTTAGAGCCCGTCTTTAT 1928
                                                                          GTTTAAAACTAATTCTTAAAATAAAGCCTTCAGTAAATGTTCATTACCAACTTGATAAA 1988
                                                                                                                                                        1835 TAATATTCATCAGCGTTGGTTT-GGGCTATAACACATGAATATCTTTTTAAATTATTAA 1893
                                                                                                                                                                                                            1894 CTGGCTATAAAATTGTAAAAATATAATGACTGCTAATATAAAATCTATAATGTGCGTTTT 1953
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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ATTTTTAGTAGTTTTTTAAAAAAACTTGGACAGTACTGTAATGTTTCCAATAATGTTGG
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                                                                                                                               CTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCATAAAAATCTGTAACTCGCATTTT
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AF316825
AF316825.1 GI:13625798
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/db_xref="taxon:10090"
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Submitted (26-OCT-2000) Cell and Molecular
University, BMC plan Cl2, Lund SE-221 84, S
Location/Qualifiers
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leucine-rich repeat protein"
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    1165
/organism="Mus musculus"

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RIAEAKLTSIPKGLPPTLLELHLDFNKISTVELEDLKRYRELORLGLGNNRITDIENG
TFANIPRVREIHLEHNKLKKIPSGLOELKYLQIIFLHYNSIAKVGVNDFCPTVPKMKK
/translation="MKEYVMLLLLAVCSAKPFFSPSHTALKNMMLKDMEDTDDDDDNDD
                    DDNSLFPTKEPVNPFFPFDLFPTCPFGCQCYSRVVHCSDLGLTSVPNNIPFDTRMVDL
                                 QNNKIKEIKENDFKGLTSLYALILNNNKLTKIHPKTFLTTKKLRRLYLSHNQLSEIPL
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                                                                                                                                                                                                                                                                    /note-"potential O-linked glycosylation"
order(220...222,259...261)
/gene="Aspn"
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order(994. .996,1093. .1095)
/gene="Aspn"
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/gene="Aspn"
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Pred. No. 8.5e-159;
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1 TGTAATACCTCCTCATCTTTCTTACACAGAGTCTGAGAACATTACATTATAGATA
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/gene="BGL3"
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Shintani, S.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 496)
                              TACCACCAACTITATIGGAGCTICACTIAGATTATAATAAAAATTICAACAGTGGAACTIG
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 GGGTGACGGTGTTCCATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCT
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Metagen Gesellschaft fuer Genomforschung mbH (DE)
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llarity 98.6%; Pred. No. 1.3e-75;
Conservative 0; Mismatches 0;
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Sequence 162 from Patent W00157058.
AX210520
AX210520.1 GI:15424780
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/db_xref="taxon:9606"
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Eukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes;
Labroidei; Cichlidae; Oreochromis.

1 (bases 1 to 1634)
Shintani,S., Sato,A., Toyosawa,S., O'hUigin,C. and Klein,J.
Biglycan-like extracellular matrix genes of agnathans and teleosts
                        AGGTTTGACCTCAGTCCCAACCATTCCATTTGATACTCGAATGCTTGATCTTCAAAA
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/protein_id="AAG40156.1"
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/db_xref="taxon:8128"
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          /tracsistion="mrefilicleargnakpyQPINVMDYLKNYDTKIHEIMISDSND
DDDDDEVDDDDDDDDYNDEDCPAHCHCSPRVVQCSDQGLISVPDKIPEDTVMIDLQNN
DITEIQQDDFKGLNKLYGLFLINNKISRIHPRAFKNNDNIELLYLSYBMLNEIPANLP
PNYIELRFHWQIDIRIQKDAFKGLRKLHVLELGANPLTNSGIEIGAFNGLSTLYIGIA
BAKLYEIFRPPSZITELSLDYNKISKVEIDPFIRKNIQRGGLAFNQIKYVENGSLA
NTPRIREIXLDNNRMRKVPFGLSSLRYLQVIFLHGNKISSVGINDFCPIRADSKKNPY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1238 TACCTGGACAACAACCGTATGAGAAAGGTCCCACCTGGCCTTAGTTCCCTGCGCTACCTA 1297
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                                                                                                                                                                                                                                                                               TGTCCAGCTCATTGTCATTGCTCACCCAGAGTGGTGCAGTGCTCTGACCAGGGTCTGATA 637
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                                                                                                                                                                               DB 5; Length 1634; 2.6e-58;
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384 c 350 g 406 t
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Pred. No. 2.6e-5
0; Mismatches 3
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62.5%;
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Best Local Similarity 62.58
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LVELRIHENKIKKVPKGVFSGLKNMNCIEMGGNPLENGGIEAGAFDGLKLNYLRVSEA
KLSGIPKGLPSTLNELHLDNNKIQAIEKEDLSQYASLYRLGLGHNNIRMIENGSLSFM
PVLRELHLDNNKLSKVPPGLPDMKLLQVYZLHSNNITQVGVNDFCPIGFGVKRAYYNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GPIPTESIPDVGLPPMDLCPFGCQCHLRVVQCSDLGLTSIPKNLPKDTTLLDLQNNKI
TEIKKDDFKGLTNLYALVIVNNKISKINEKAFEPLQKMQKLYISKNNLEEIPKNLPKS
                                                                                                                                                                                         VRT 26-JAN-2000
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AAATACTGGGCCATACAGCCGGCAACCTTTCGCTGCGGACCGGACGGGGGTGTTCAG 1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kyoto University, Department of Zoology; Sakyo-ku, Kyoto 606 8502,
Japan (E-mail:goto@develop.zool.kyoto-u.ac.jp, Tel:+81-75-753-4082,
Fax:+81-75-753-4080)
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Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Graduate School of
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Gotco, T. and Kubota, H.Y.
Gotco, T. and Kubota, H.Y.
CDNA of biglycan of Xenopus laevis
Published Only in DataBase (2000)
2 (bases 1 to 2960)
Gotco, T. and Kubota, H.Y.
Direct Submission
Submitted (20-JAN 2000) Toshiyasu Goto, Gr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.0%; Score 367.8; DB 5; 62.4%; Pred. No. 2.5e-58; Live 0; Mismatches 347;
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/protein_id="BAA90246.1"
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Xenopus laevis
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Parkway, St. Louis, MO 63108, USA COMMENT On Jun 12, 2002 this sequence version replaced gi:21326414.	Center: Washington University Genome Sequencing Center Center code: WUGSC Web site:http://genome.wustl.edu/gsc/index.shtml Contact: submissions@watson.wustl.edu Contact: nubmissions@watson.wustl.edu Center project Information	Sequencing vector: M13: 0% Sequencing vector: plasmid; 100% Sequencing vector: plasmid; 100% Chemistry: Dye-primer ET; 0% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.990319 Consensus quality: 260453 bases at least Q40 Consensus quality: 261297 bases at least Q30 Consensus quality: 261814 bases at least Q20 Insert size: 191000; agarose-fp Insert size: 262986; sum-of-contigs Ouality coverage: 19.29 in Q20 bases; sum-of-contids Onality coverage: 10.57 in Q20 bases; sum-of-contids	* NOTE: This is a 'working draft' sequence. It currently * consists of 5 contigs. The true order of the pieces * is not known and their order in this sequence record is * arbitrary. Gaps between the contigs are represented as * runs of N, but the exact sizes of the gaps are unknown. * This record will be updated with the finished sequence * as soon as it is available and the accession number will * be preserved. 1	gap of contig gap of contig gap of contig contig lifiers us musc xon:100	misc_feature 1119	hes 75% Conservative 1173 CAGNADATCTCCTCATTCT 11111111111111111111111111
DD 690 AACTGTACATCTCTAAAAACACCTCGAGGAAATACCCAAAAACCTTCCCAAGTCTCTGG 749	QY 751 CAGAACTCCAGAATTCATGAAAATAAAGTTAAGAAAATACAAAAGGACACATTCAAAGGAA 810 DD 750 TGGAGCTGCGCATTCACGAAACAAATTAAGAAGGTCCCAAAGGGCGTCTTCAGTGGAC 809 QY 811 TGAATGCTTTTACACGTTTTGGAAATGAGTGCAAACCCTCTTGATAATAGGGATAGAGC 870 LH 1 1 1 1 1 1 1 1 1 1	871 870 931 930 990	ACAGATACTCCTCATCATACTATACTCTTTTATGCCTTTTTTATACTCTTTTTTATACTCTTTTTATACTCTTTTTATACTCTTTTTATACTCTTTTTATACTCTTTTTATACTCTTTTTATACTCTTTTATACTATACTATACTATACTATACTCTTTTATACTAC	Oy 1231 CAACAGTGCCAAAGATGAAGAAATCTTTATACAGTGCAATAAGTTTATTCAACAACCGG 1290 1	AC123954 263505 bp Mus musculus chromosome UNK clone SEDUENCE, 5 unordered pieces. DN AC123954.2 GI:21392602 AC123954.2 GI:21392602 HTG; HTGS_PHASE1; HTGS_DRAFT; HTG house mouse. ISM mus musculus Mus musculus Eukaryota; Metazoa; Chordata; Cra Mammalia; Eutheria; Rodentia; Sci E	TITLE The Sequence of Mus Musculus Cloue JUGNRAL Unpublished REFERENCE 2 (bases 1 to 263505) AUTHORS MCPherson,J.D. and Waterston,R.H. TITLE Direct Submission JUGNRAL Submitted (05-JUW-2002) Genome Sequencing Center, 4444 Forest Park REFERENCE 3 (bases 1 to 263505) AUTHORS MCPherson,J.D. and Waterston,R.H. TITLE Direct Submission JUGNRAL Submitted (12-JUN-2002) Genome Sequencing Center, 4444 Forest Park

AGAATGAGTGTTCAG 1352 	TTAATATAAGATTCA 1412 	IATTATATACAAG 1472 IATTATACACATAAG 131315	GACTTATTTATGACAAGAAATTTCAACG 1532 	AAACAAGCATCTATTGCAGTTT 1592 -AATAAATTTCTATTGCAGTGT 131225	TTCCTTTCTCATAA 1652 TCTTTTTT 131171.	ATTTAAAAAGAACT 1712 CAGTCAAACAGAATT 131113	ATTTGCTGTTAGAAA 1772 	TCTTATTCTTTAGT- 1831 AGTAGTTTTTAAAA 130994	ATTIGATATATCTT 1889 	TATGTTTAAACTAATTTCTTAAA 1949 - -AGAATCAAATTCTCAACTCATA 130915	TCATAAGAGCTGGTT 2009 TCATCAGAGTTGGTT 130871	TAAAAATCTCTGTAA 2069 ATAAATTGTAAAA 130812	CCGCTATTATAAGCT 2129 	ACTCTAAGGATATT 2189 	CTAACAATTCTACAC 2249 	CACATCTAGTATAAC 2309 	
AAATACTGGGAAATGCAACCTGCAACATTCGTTGTGTTTTGAGCAGAATGAGTGTTCAG 	CTTGGGAACTTTGGAATGTAATAATTAGTAATTGGTAATGTCCATTAATATATAAGATTCA 	AAAATCCCTACATTTGGAATACTTGAACTCTATTAATAATGGTAGTATTATATATA	CAAATATCTATTCTCAAGTGGTAAGTCCACTGACTTATTTTATGACAAGAAATTTCAACG 	GAATTTTGCCAAACTATTGATACATAAGGGGTTGAGAGAAACAAGCATCTATTGCAGTTT 	CCTTTTTGCGTACAATGATCTTACATAAATCTCATGCTTGACCATTCCTTTCTTCATAA 	CAAAAAAGTAAGATATTGGGTATTTAACACTTTGTTATCAAGCACATTTTAAAAAGAACT 	GTACTGTAAATGGAATGCTTGACTTAGCAAAATTTGTGCTCTTTCATTGCTGTTAGAAA 	aacagaattaacaaagacagtaatgtgaagagtgcattacactattcttattctttagt- 	AACTTGGGTAGTACTGTAATATTTTAATCATCTTAAAGTATGATTTGATATCTT	ATTGAAATTACCTTATCATGTCTTAGAGCCCGTCTTTATGTTTAAAACTAATTTCTTAAA	ATAAAGCCTTCAGTAAATGTTCATTACCAACTTGATAAATGCTACTCATAAGAGCTGGTT 	TGGGGCTATAGCATATGCTTTTTTTTTTAATTATTACTGATTTAAAAATCTCTGTAA 	AAACGTGTAGTGTTTCATAAAATCTGTAACTCGCATTTTAATGATCCGCTATTATAAGCT	TTTAATAGCATGAAAATTGTTAGGCTATATAACATTGCCACTTCAAGGAATATT	TTGAGATATCCCTTTGGAAGACCTTGCTTGGAAGAGCCTGGACACTAACAATTCTACAC	CAAATTGTCTCTTCAAATACGTATGGACTGGATAACTCTGAGAAACACATCTAGTATAAC	2310 TGAATAAGCAGAGCATCAAATTAAACAG 2337
1293	1353	1413	1473	1533	1593	1653	1713	1773	1832	1890	1950	2010	2070 130811	2130	2190	2250	2310 130590
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Search completed: May 31, 2003, 12:40:18 Job time : 6346 secs

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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM nucleic - nucleic search, using sw model

Run on:

May 31, 2003, 09:47:27 ; Search time 556 Seconds (without alignments) 9939.575 Million cell updates/sec

Title: Perfect score:

US-09-944-884-1 2454

IDENTITY_NUC Gapop 10.0 , Gapext 1.0 Scoring table: Sequence:

2185239 seqs, 1125999159 residues

Potal number of hits satisfying chosen parameters: : rched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 summaries

N_Geneseq_101002: Database :

/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980. /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981. /gcgdata/geneseg/geneseqn-embl/NA1990 /geneseqn-embl/NA1993 /gcgdata/geneseq/geneseqn-emb1/NA1988. geneseqn-embl/NA199 /SIDS2/gcgdata/geneseg/genesegn-emb1/NA1982 gcgdata/geneseq/geneseqn-embl/NA1987 /SIDS2/gcgdata/geneseg, SIDS2 /SIDS2/ /SIDS2/ /SIDS2/ /sids

/geneseqn-embl/NA1995.DAT /SIDS2/gcgdata/geneseq/genesegn-emb1/NA1996.DAT /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994 /SIDS2/gcgdata/geneseg, /SIDS2

/SIDS2/gcgdata/geneseg

/qcqdata/geneseg/genesegn-emb1/NA1998.DAT

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/SIDS2,

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Human PRO241 nucle	Human cDNA sequenc	Human angiogenesis	Human PRO241 cDNA	Human PRO241 cDNA.	Human cDNA sequenc	DNA encoding human	Human polynucleoti	DNA encoding novel
	ID	AAX80043	AAS21407	ABL95575	ABL88086	AAA49551	AAH18405	AAS33113	AAI59507	AAS86756
	DB	20	22	24	24	21	22	22	22	23
	Duery Match Length DB ID	2454	2454	2454	2454	2455	2089	1674	1548	1492
dФ	Query Match	100.0	100.0	100.0	100.0	9.66	72.8	62.1	58.2	52.5
	Score	2454	2454	2454	2454	2443	1786.8	1524	1427.4	1288.8
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17-DEC-1997 997

C 0)	Human adifferential Human secreted pro Rat biglycan cDNA. Mature decorin Pr- Human recombinant Human normal uteru Human prostate exp Human prostate exp	prostate prostate normal coding ncoding en Al/d DNA enc	Breast cancer rela Breast cancer rela Stomach cancer rela Human prostate tum Human bladder tumo Human DNA sequence Sequence encoding
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ALIGNMENTS

Human; PRO protein; tumour necrosis factor family; TNF; cytokine; secreted protein; transmembrane protein; inflammation disorder; ss Human PRO241 nucleotide sequence. AAX80043 standard; cDNA; 2454 BP 98US-0075945. 97US-0067411. 97US-0069278. 97US-0069334. 9703-0069425. 9703-0069694. 9703-0069696. 9703-0069702. 9703-0069870. 98WO-US25108 12-AUG-1999 (first entry) WO9928462-A2 Homo sapiens 01-DEC-1998; 10-JUN-1999 25-FEB-1998 AAX80043; -DEC-1 RESULT 1 AAX80043

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                                                                                                                                            The present invention describes nucleic acids encoding PRO secreted and transmembrane proteins used therapeutically. The PRO proteins have cytostatic, anti-inflammatory, anti-proliferative and immunosuppressive activity. The proteins and polynucleotides can be used in therapy, identification of homologues, raising antibodies and design of probes and primars. They can be used in a range of diseases ralated to proteins that they have homology with, e.g. a PRO protein having homology to complement proteins may be used in inflammatory responses.
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98US-0070440.
98US-0074086.
98US-0074092.
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P-PSDB; AAY17820.
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99US-0170262 99WO-US30095 99WO-US30911 99WO-US30999 99WO-US31243

02-DEC-1999 09-DEC-1999

16-DEC-1999; 20-DEC-1999; 20-DEC-1999; 30-DEC-1999;

2000WO-US03565

18-FEB-2000;

22-FEB-2000; 24 - FEB - 2000; 24 - FEB-2000; 20-MAR-2000; 21-MAR-2000; 17-MAY-2000; 22-MAY-2000;

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2000WO-US13705

30-MAY-2000;

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to factor VIIA. The PRO polypeptides can be used in assays to identify molecules involved in binding interactions. The polynucleotides encoding PRO polypeptides can be used to generate probes, antisense RNA/DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRO polypeptides, to modulate biological activities of cells expressing PRO polypeptides, to modulate biological activities of cells expressing PRO polypeptides, and to detect the presence of mammalian lung, colon, breast, prostate, rectal, cervical or liver tumours by comparing PRO polypeptide expression in a cell sample to that in a control sample. Some of the 275 sequences are also useful to stimulate the release of tumour necrosis factor-alpha (FNF-alpha) from human blood, the proliferation or differentiation of chondrocytes, the proliferation or gene expression in pericyte cells, the release of protogolycans from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the PRO polypeptides may modulate glucose or free fatty acid uptake by skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cartilage, the proliferation of inner ear utricular supporting cells or of T-lymphocytes, the release of a cytokine from peripheral blood monocytes (PBMCs), or the proliferation of endothelial cells. Some of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encode for novel human secretory and transmembrane
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRO polypeptides can be used to generate probes, antisense RNA/
transgenic or knock out animals and can be used in gene therapy
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PRO polypeptides,
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Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g.

Claim 3; Fig 327; 813pp; English. breast, prostate, cervical

lung,

Gao

Filvaroff E, .(L, Sherwood S;

Deforge L, Desnoyers L, Filvaroff E, A, Godowski PJ, Gurney AL, Sherwood S Tumas D, Watanabe CK, Wood WI, Zhang

Goddard

Baker KP, Beresini M, Gerritsen ME, Goddard Smith V, Stewart TA,

WPI; 2001-408281/43.

P-PSDB; AAU12335

(GETH) GENENTECH INC.

Sequence 2454 BP; 835 A; 432 C; 417 G; 770 T; 0 other;

Human secretory and transmembrane; PRO; mammalian; cancer; lung; breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alpha; cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle; adipocyte; A-peptide; factor VIIA; gene therapy; ss.

01-DEC-2000; 2000WO-US32678

WO200140466-A2 Homo sapiens

07-JUN-2001

Human cDNA sequence encoding for PRO241 polypeptide.

(first entry)

24-OCT-2001

AAS21407;

AAS21407 standard; cDNA; 2454 BP

RESULT 2 AAS21407

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DB 22; Length 2454;
Score 2454;
Pred. No. 0;
 100.0%;
                100.08;
                            Matches 2454; Conservative
Query Match
Best Local Similarity
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1 GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCAGGACT

	GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACT 60		Db Qy	1081 GTCTTGCTAACATACCACGTGTGAGAGAATACATTTGGAAAACAATAAACTAAAAAAA 1140 1141 TCCCTTCAGGATTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTC
61	<pre>1 GTGTTGAAGGGTGTTTTTTTTTTTAAATGTAATACCTCCTCATCTTTTCTTCTTACAC 120</pre>		ସ୍ପ	41 TCCCTTCAGGATTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTC
121	AGTGTCTGAGAACATTTACATTATAGATAAGTACATGGTGGATAACTTCTACTTTTA 1		a q	UI TIGCAMAGIGGGAGIAAAIGACTICIGICCAAAAGIGCCAAAAGIGAAGAAICTITAI 12
H .H	181 GGAGGACTACTCTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGG 240 		Qy Dp	1261 ACAGTGCAATAAGTTTATTCAACAACCCGGTGAAATACTGGGAAATGCAACCTGCAACAT 1320
6 6	241 AGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTTAGCCCTTCAC 300 		Qy Db	1321 TTCGTTGTGTTTTGAGCAGAATGAGTGTTCAGCTTGGGAACTTTGGAATGTAATAATTAG 1380
ĕ ĕ	ACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGATGATGATGATG		Qy Db	1381 TAATTGGTAATGTCCATTTAATATAAGATTCAAAAATCCCTACATTTGGAATACTTGAAC 1440
m m	ATGATGATGATGATGATGATGAGGACAACTCTCTTTTTCCAACAAGAGAGGAGAA 4 		Qy Db	1441 TCTATTAATAATGGTAGTATTATATATACAAGCAAATATCTATTCTCAAGTGGTAAGTCC 1500
4 4	ATTCAC 48 		Qy Db	01 ACTGACTTATTTATGACAAGAAATTTCAACGGAATTTTGCCAAACTATTGATACATAAG 156
4 4	TTGATA S TTGATA S	<u> </u>	Qy Db	1561 GGGTTGAGAAACAAGCATCTATTGCAGTTTCCTTTTTGCGTACAAATGATCTTACATA 1620
ro c	CTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAAGAAAATGATTTTAAAG 60 		Qy Db	1621 AATCTCATGCTTGACCATTCCTTCTCATAACAAAAAGTAAGATATTCGGTATTTAAC 1680
99	GACTCACTTCACTTTATGGTCTGAACAACAACAACAAGGTAACGAAGATTCACCGAAGATTCATCACAACAACAACAAGAAGAAGAAGAAGAAACAAAC		Oy Dp	1681 ACTTTGTFATCAAGCACATTTTAAAAGGAACTGTACTGTA
ت ق	AAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTG		Oy Dp	1741 AAAATTGCTCTTTCATTGCTGTTAGAAAACAGAATTAACAAAGACAGTAATGTGA 1800
27 27	AAATACCACTTAATCTTCCCAAATCATTAGCACACTCAGAATTCATGAAATAAAGTTA 78 HIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	· · ·	oy Db	1801 AGAGTGCATTACACTATTCTTATTCTTAGTAACTTGGGTAGTACTGTAATATTTTAAT 1860
27 37	AGAAAIPCACAAAGGACACATCAAAGGAATGAATGCTTTACACGTTTTGGAAATGAGTG 8 	··	Qy Db	1861 CATCTTAAAGTATGATTGATATAATCTTATTGAAATTACCTTATGATGTCTTAGAGGCCC 1920
ത് ത്	GTTCC 90		Qy	1921 GTCTTTATGTTTAAAACTAATTTCTTAAAATAAAGCCTTCAGTAAATGTTCATTACCAAC 1980
, <u> </u>	ATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTTAT .		Oy Db	1981 TIGATAAATGCTACTCATAAGAGCTGGTTIGGGGCTATAGCATATGCTTTTTTTTTT
م م	TGGAGCTTCACTTAGATTATAAAAATTTCAACAGGGAACTTGAGGATTTTAAACGAT 10		QY Db	2041 ATTATTACCTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCATAAAAATCTGTAACT 2100
1021	ACAAGAACTACAAAGCCTGGGCCTAGGAAACAAATCACAGAATATCGAAAAATGGAAAATGGGAAAATGGGAAAATGGGAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAATGGGAAAAAA	<u> </u>	Qy Db	2101 CGCATTTTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAATTGTTAGGCTATATA 2160
1081	GTCTTGCTAACATACCACGTGTGAGAATACATTGGAAACAATAAAGTAAAAAAA 114		Qy Db	2161 ACATTGCCACTTCAACTCTAAGGAATATTTTTGAGATATCCCTTTGGAAGACCTTGCTTG

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61 GIGITGAAGGGTGTTTTTTTTTTAAATGTAATACCTCCTCATCTTTTCTTTACAC:120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTAATCTGTGGGGGGGGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 | GACTAATCTGTGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCACCAGGACT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 GGAGGACTACTCTTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTTAGCCCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     One hundred and eighty seven nucleic acids encoding PRO polypeptides. useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       healing. The present sequence is a coding sequence of the invention
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                                                                                                                                                                                                                                                                                                                                                Goddard A;
                                                                                                                                                                                                                                                                                                                                                            Gurney AL, Hillan KJ, Marsters SA, Pan J, Watanabe CK, Williams PM, Wood WI, Ye W;
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                                                                                                                                                                                                                                                                                                                                                 Gerritsen ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 2454; Best Local Similarity 100.0%; Pred. No. 0; Matches 2454; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                 Gerber H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Fig 29; 567pp; English.
2001US-0870574.
2001WO-US17443.
2001WO-US17800.
2001WO-US19692.
2001WO-US00000.
                                                                                                                                                      GERRITSEN M E.
                                                                                                                                                                                                                                          PAN J.
PAONI N F.
STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
                                                                                                                                                                                                                                                                                                                                                 Ferrara N,
                                                                                            GENENTECH INC
                                                                                                                                                                                  GODOWSKI P J
                                                                                                                                                                                                            HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-171999/22.
                                                                                                                                                                                                 GURNEY A L.
                                                                                                        BAKER K P.
FERRARA N.
                                                                                                                                                                     GODDARD A.
                                                                                                                                       GERBER H.
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20-JUN-2001;
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 30-MAY-2001;
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                                                                                                                                      GAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTATGTATTTCTTATTGGCATTCAA 2400
                                                                                                                                                      Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer; atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder; cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; gene; ss:
                                                                              ATAACTCTGAGAAACACACTTAGTATAACTGAATAAGCAGAGCATCAAATTAAACAGACA
                                                                                                                                                                                                   CATATGTAAAATCAGAAAACAGGGAAATTTTCATTAAAAATATTGGTTTGAAAT 2454
                                                                                                                                                                                                                 2401 CATATGTAAAATCAGAAAACAGGGAAATTTTCATTAAAAATATTGGTTGAAAT 2454
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Gaps

us-09-944-884-1.rng

Claim 2; Fig 29; 565pp; English.

hypotensive;

cytostatic; antiangiogenic;

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vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; canotenial disorder; cancer; anglogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; hymeumatoid arthritis; myocardial infarction; thromopophiebitis; tumour angiogenesis; breast carcinoma; liver carcinoma; wound healing; chromosome mapping; gene mapping; gene; ss.
                                                    Human PRO241 cDNA sequence SEQ ID NO:29
                                                                           angiogenesis; cardiant;
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Goddard A; A, Pan J, SA, PJ, Gurney AL, Hillan KJ, Marsters SA, IF, Watanabe CK, Williams PM, Wood WI, Gerritsen ME, Gerber H, (GETH) GENENTECH INC. Ferrara N, Stephan JF, Godowski Baker

2001US-0854208

MAY

05-10-1

2001

MAR-MAR-APR-

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2001WO-US17092 001WO-US17443

25-MAY-2001; 25-MAY-2001; 30-MAY-2001; 30-MAY-2001;

MAY-MAY-

2001US-0866034 2001US-0870574 Paoni NF;

WPI; 2002-090516/12. P-PSDB; ABB84831.

One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal -

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                                                                                          ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynucleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, thrombophic hymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynucleotides have applications in molecular biology, including use as hypridisation probes, and in chromosome and gene mapping. ABL88259 to ABL88267 represent primers and probes used in the exemplification of the present invention.
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Best Local Similarity 100.

Matches 2454; Conservative
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121 AAATACCACTTAATCTTCCCAAATCATTAGCAGAATTCATGAAAATAAAATGATG 180 181 AGAAAATACAAAAGGACATTAGCAGATGAATGAATGCTTTACACGTTTTGGAAATGAGTG 180 181 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	1321 TCGTTGCAATAAGTTTATTCAACAACCGGGGGGGAATGCAACCGGGAACTGGCAACAT 1320 1321 TCGTTGCCAATAAGTTTATTCAACAACCGGGGGAATGCAATGCAACTGCAACATTAGGGAATGTAATTAG 1380 1321 TCGTTGTGTTTTGAGCAGAATGAGTGTTCACCTTGGGAACTTTGGAATGTAATTAG 1380 1321 TTCGTTGTGTTTTAGCAGAATGAGTGTTCAACTTGGGAATGTAATTAG 1380 1321 TTCGTTGTGTTTTAGCAGAATGAGTTCAACAATTGGAATGTTATATTAG 1380 1331 TAATTGGTAATGTCCATTTAATATAAAATTCAAAAATCCCTACATTTGGAATACTTGAAC 1440 1331 TAATTGGTAATGTCCATTTAATATAAAAAAACCCAAAATGTTTTGGAATACTTGAACT 1441 1331 TAATTGGTAATGTCCATTTAATATAAAAAAAAAAAAAAA

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                                        Gurney AL;
Wood WI;
                              Ferrara N, Filvaroff E;
L PJ, Grimaldi CJ, Gurney
Roy MA, Tumas D, Wood W
                                                                                       New human nucleic acids encoding secreted and polypeptides, designated as PRO polypeptides, and diagnostic agents
                                       Godowski PJ,
                                      d A, Gouchar, J, Napier MA,
                                Eaton DL,
                                                                                                                       English.
98US-0113296
                                               Kljavin IJ,
                                        Goddard
                                                                                                                       Claim 2; Fig 1; 187pp;
                                Botstein D,
                (GETH ) GENENTECH INC
                                                                WPI; 2000-412324/35
                                                                        P-PSDB; AAB01311.
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22-DEC-1998;
                                               Hillan KJ,
                                         Gerritsen
                                Baker KP,
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New human nucleic acids encoding secreted and transmembrane polypeptides which are designated as PRO polypeptides are described. The membrane-bound proteins have various industrial applications, including as pharmaceutical and diagnostic agents. The membrane-bound proteins can also be employed for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. Anti-PRO antibodies are useful for the affinity purification of PRO from recombinant cell culture or natural sources.

The membrane-bound proteins have various industrial applications, including as pharmaceutical and diagnosts. The membrane-bound proteins have various industrial applications, including as pharmaceutical and diagnosts. The membrane-bound proteins can also be employed for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction anti-pro antibodies are useful for the affinity purification of PRO from recombinant cell culture or natural sources. Sequence 2455 BP; 836 A; 432 C; 417 G; 770 T; 0 other; Ouery Match 199.68; Score 2443; DB 21; Length 2455; Best Local Similarity 100.08; Pred. No. 0; 199.68; Score 2443; DB 21; Length 2455; Best Local Similarity 100.08; Pred. No. 0; 199.68; Score 2444; DI IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ddiddiddiddiddiddiddiddiddiddiddiddiddi
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Saito K, Otsuki 1

Hayashi K, S A, Nagai K,

nikawa T, Wakamatsu

Isogai T, Nishikawa

Sugiyama T,

Ota T, I

4PI; 2001-318749/34

(HELI-) HELIX RES INST

11-JAN-2000; 2000JP-0118776. 02-MAY-2000; 2000JP-0183767. 09-JUN-2000; 2000JP-0241899.

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                                                                                                                                                                                                                                                                                                                                      The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-dT primer and an oligonucleotide complementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end polynucleotide which comprises a 3'-end sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143 ATAGATAAGTACATGGTGGATAACTTCTACTTTTAGGAGGACTACTCTCTGACA
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                                                                                                                                                                                                                                                                                                       Claim 8; SEQ ID 18472; 2537pp + CD ROM; English
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361 TIGCICAGATITAGGITIGACCICAGTCCCAACCAATTCCATTTGATACTCGAATGCT 420	551 TGATCTTCAAAACAATAAAATTAAGGAAATCAAAGAAATGATTTTAAAGGACTCACTTC 610	IGNICTICAMMACANINAMAIIMAGGAMAICAMAGAMAAIGAIXIIMAAGGACICACIIC	611 ACTTPATGGTCTGATCCTGAACAACAAGTAACAAGATTCACCCAAAAGCCTTTCT 670	191111111111111111111111111111111111111	AACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTGAAATACCACT	AACCACAAAGAAGITGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTGAAATACCACT	731 TAATCTTCCCAAATCATTAGCAGAACTCAGAAATTCATGAAATAAAGTTAAGAAATACA 790	INTICLICCONNICATINGCAGAGICAGAATICATGAAAAAAAAAAAAAAAAAAAAAA	791 AAAGGACACATTCAAAGGAATGAATGCTTTACACGTTTTGGAAATGACTGCAAACCCTCT 850 111111111111111111111111111111111111		851 TGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGGTGCTGCTGTCCATATCAGAAT 910 721 HCIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	C	TOCASARACIAACTICASTICCIAAASSCTIACCACCAACTITATTSSASCTICA	781 TGCAGAAGCAAAACTGACCTCAGTTCCTAA~	971 CTTAGATTATAATAATTTCAACAGTGGAACTTGAGGATTTTAAACGATACAAAGAACT 1030	811 810	1031 ACAAAGCTGGGCCTAGGAAAAAAAAAAAAAAAAAAAAAA	811 810	-	1031 CAIACCACGIGIGAGAAAIACAITIGGAAAACAAIAAACIAAAAAAAAAA		1151 ATTACCAGAGTIGAAATACCTCCAGATAATCTTCCTTCATTCTAATTCAATTGCAAGAGT 1210	. 811	1211 GGG		・ サンサンサザンクサかる ひょうつけつ ひょうのけょ かんかいしゅん まんりつ コンタイプ からない かんしゅう まん 1771			1331 TTTGAGCAGAATGAGTGTTCAGCATGGGAATGTAATAATTAGTAATTGGTAA [968 TTT	1391 TGT	1028 IGTCCATTTAATATAAGATTCAAAAATCCCTACATTTGGAATACTTGAACTCTATTAATA 1087	1451 ATG		1511 TTTATGACAAGAAATTTCAACGGAATTTTGCCAAACTATTGATACATAAGGGGTTGAGAG 1570		1571 AAP	1207	
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2110 ATATTTTGAGATATCCCTTTGGAAGACCTTGCTTGGAAGAGCCTG 2230 CTCAGAGTTCTTATGTATTCTTATTGGCATTCAACATATGTAAA 2410 2050 1810 1445 1870 1505 AAGCTTTTAATAGCATGAAAATTGTTAGGCTATATAACATTGCCAC 2170 1750 1385 TGTAAAAACGTGTAGTGTTTCATAAAATCTGTAACTCGCATTTTAA AAAGAACTGTACTGTAAATGGAATGCTTGACTTAGCAAAATTTGTG CTTTAGTAACTTGGGTAGTACTGTAATATTTTAATCATCTTAAAG TGGTTTGGGGCTATAGCATATGCTTTTTTTTTTTAATTATTACCT n immunodeficiency virus; HIV; anaemia; angina; nntiarteriosclerotic; cardiant; vascular; nnbolytic; antimicrobial; ophthalmological; disease; Parkinson's disease; human; cancer; ncer; hyperproliferative disorder; infection; eted protein, Seg ID No 72. ; 1674 BP. ry)

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to novel isolated nucleic acid molecules (I)

cucading human secreted proteins (II). (I) and (II) are used to prevent,

cutator or amelicate a medical condition in e.g. humans, mice, rabbits,

cats, dogs, chickens or sheep. (I) and (II) may be used in

the prevention, treatment and diagnosis of diseases associated with

compropriate expression of secreted proteins. (I) and complementary

compropriate expression of secreted proteins. (I) and complementary

complements and antibodies and proteins. (I) and complementary

complements of milbodies and in assays to identify modulators

composites and antibodies and in assays to identify modulators

composites and antibodies and in assays to identify modulators

composites and antibodies and antigonists may also be used as attigonists of the expression and activity of (II). The anti-(II) antibodies

composite as diagnostic agents for detecting the presence of complementary

composites and activity of (II). The anti-(II) antibodies

may also be used as diagnostic agents for detecting the presence of (III)

in samples (e.g. by enzyme linked immunosorbant assay (ELISA)). The disconders include for example: immuno-fautcimumume disconders (III)

composites and coular disconders (e.g. Alzhehimer's discase,

composites, and coular discorders (e.g. cardiac arrest, tachycardia, and and thrombosis), infections caused by bacteria, viruses and charcot-Marie-Tooth disease), cardio-/

agonists, antagonists and antibodies can also be used to promote word agonists, antagonists and antibodies can also be used to promote word for confined in elections). (I) and (II), agonists, antagonists and antibodies can also be used to promote word bealing, maintain organs before transplantation, and support cell content of primary tissues. Abs33466 represent human secreted protein coding sequence data for this patent did not appear in the printed or the printed or the content of primary tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATTATAATAAATTTCAACAGTGGAACTTGAGGATTTTAAACGATACAAAGAACTACA 1033
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New nucleic acids and polypeptides, useful for diagnosing, preventing or treating medical conditions
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Gaucher's disease; neurological disease; cerebrovascular disorder; thrombosis; wound healing; ss.
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Pred. No. 1.4e-309;
; Mismatches 19;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; SEQ ID No 72; 753pp; English
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98.3%;
                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                             31-JAN-2000; 2000US-0179065
                                                                                                                                                                                                                           17-JAN-2001; 2001WO-US01347
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P-PSDB; AAU20404.
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                                                                             Homo sapiens
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                               ACTAACAATTCTACACCAAATTGTCTCTTCAAATACGTATGGACTGGATAACTCTGAGAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
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Zhang J
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Yang Y,
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Xue AJ,
~ RT;
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Wang Z, Wehrman T, Xu C, Xue
Zhou P, Goodrich R, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                          Human polynucleotide SEQ ID NO 1710
                                                                                                                                                                                                                                                                                                                          AAI59507 standard; cDNA; 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0488725.
2000US-0552317.
2000US-0598042.
2000US-0620312.
2000US-0653450.
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2000US-0693036.
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0B; AAM40351.
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09-JUL-2000; 2
19-JUL-2000; 2
03-AUG-2000; 2
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19-OCT-2000;
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The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral nervous system, such as peripheral nervous injuries, peripheral nervous and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening,
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                                                                                                                                                                                                                              patent did not form part of the printed
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                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                   for receptor activity, arthritis and inflammation, leukaemias
                                                                                                                                                                                                                                                                                                    DB 22; Length 1548;
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                                                                                                                                                                                                                                                                     Sequence 1548 BP; 512 A; 300 C; 294 G; 442 T; 0 other;
                                                                                                                                                                                                                                                                                          Score 1427.4; DB 22;
Pred. No. 2.4e-289;
....tches 6;
                                                                                                                                                                                                                                                                                                                                  0; Mismatches
NO 1710; 10078pp; English.
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                                                                                                                                                                                                                                                                                                       58.2%;
99.1%;
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Matches 1469; Conservative
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          GTGTTCCATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCA 953
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CTAAGTGAAATACCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGAAAAT
                                           ATGAGTGCAAACCCTCTTGATAATAGTGGGATAGAGCCAGGGGCATTTGAAGGGGTGACG
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Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding novel human diagnostic protein #22560.
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                                                                                                                                                         AAS86756 standard; cDNA; 1492
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30-MAR-2001; 2001WO-US08631

11-0CT-2001

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The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGAGAACATTTACATTATAGATAAGTAGTACATG-GTGGATAACTTCTACTTTTAGGA 183
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from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AATCTGTGGGAGCAGTTATTCCAGTATCACCCAGGGTGCACCACCACCACCAGGACTGTGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                   New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
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Note: The sequence data for this patent did not appear in the specification, but was obtained in electronic format directly
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Pred. No. 2.4e-260;
0; Mismatches 27;
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                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID No 22560; 103pp; English
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96.8%;
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23-AUG-2000; 2000US-0649167.
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Best Local Similarity 96.8
Matches 1445; Conservative
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                                                                                                          Drmanac RT, Liu C,
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The invention interacts to move it is condition in e.g. humans, mice, rabbits, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. (I) and (II) may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate expression of secreted proteins. (I) and complementary sequences may also be used as DNA probes in diagnostic assays (e.g. of similar nucleic acid sequences in samples, and so which patients may be unced of restorative therapy. (II) may also be used as antigens in the production of antibodies and in assays to identify modulators conclude for extractions and antagonists may also be used as diagnostic agents for detecting the presence of (II) antibodies and antagonists may also be used as diagnostic agents for detecting the presence of (II) on samples (e.g. by enzyme linked immunosorbant assay (EIISA). The conformation immunodeficiency virus) infections, anaemia, rheumatoid arthritis conformation and chiral miner/autorial and characters and hyperproliferative disorders (e.g. the presence of III) and minerapy of the seases (e.g. Alvenancers and hyperproliferative disorders (e.g. melanomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas, neoplasms of the breast or liver, Sezary syndrome and candinomas and antibodies can also be used to promote w
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Note: The sequence data for this patent did not appear in the printed
specification but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , nucleic acids and polypeptides, useful for diagnosing, preventing treating medical conditions -
                                                                                                                                                                                                                                     immunodeficiency virus; HIV; anaemia; angina;
                                                                                                                                                                                                                                                                                                               cancer;
                                                                                                                                                                                                                                                         rheumatoid arthritis; antiarteriosclerotic; cardiant; vascular; cerebroprotective; thrombolytic; antimicrobial; ophthalmological; cytostatic; Alzhemer's disease; Parkinson's disease; human; cancer: multiple sclerosis; cancer; hyperproliferative disorder; infection; Gaucher's disease; neurological disease; cerebrovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to novel isolated nucleic acid molecules (I)
                                                                                                                                                                                      Seq ID No 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                           DNA encoding human secreted protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID No 694; 753pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM;
                                              DNA; 18595
                                                                                                                                                                                                                                                                                                                                                                                  thrombosis; wound healing; ds.
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                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Barash SC,
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                                              AAS33411 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; cytostatic; antiinflammatory; immunoregulatory; tissue integrity; wound healing; immune response; vaccine; cancer; asthma; allergy; cell trafficking; BGN; bone/cartilage proteoglycan I protein; biglycan; PG-S1; secreted protein; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The patent discloses novel polynucleotides and their corresponding proteins which play a major role in induction of growth, cell migration and proliferation, cell-cell interaction and the differentiation of tissue specific cells. These proteins are important in the maintenance of tissue integrity and thus are important in wound healing. They are useful in various assays to determine the biological activity, to raise antibodies, to isolate corresponding interacting proteins or other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel isolated polypeptide useful to isolate corresponding interacting
                                                                         ATTGTCTCTTCAAATACGTATGACTGGATAACTCTGAGAAACACATCTAGTATAACTGA
                                                                                                                                               ATAAGCAGCAGCATCAAATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGT
                                                                                                                                                                                          TCTTTATGTATTTCTTATTGGCATTCAACATATGTAAAATCAGAAAACAGGGAAATTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proteins or other compounds, to quantitatively determine levels of interacting proteins or other compounds, and as therapeutic target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
/product= "Mouse bone/cartilage proteoglycan I"
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse bone/cartilage proteoglycan I (BGN) cDNA
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2000US-0724864
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                                                                                                                                                                                                                     CAAATATCTTAATTTCTCAAGTGGTAAGTCCACTGACTTATTATGACAAGAAATTTCAACG 17668
                                                                                                                                                                                                                                                                                                                                                                                                                                                           -CITITIGEGIACAAATGATCITACAIAAATCICCATGCTIGACCATTCCTTTCTTCATAA 17786
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                                                                                       CAGATAATCTTCCTTCATTCTAATTCAATTGCAAGAGGGGGGGTAAATGACTTCTGTCCA 1232
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                                                                                                                                                                                                                                                                                                                                                                                                  Length 18595;
                                                          2;
   0 other;
                                                          Indels
 6066 A; 3650 C; 3516 G; 5363 T;
                           DB 22;
                                                        5
                                         Pred. No. 6e-253;
0; Mismatches
                             Score 1254.8;
                             51.1%;
ilarity 99.7%;
Conservative
 BP;
                                          Similarity
Sequence 18595
                                                        Matches 1278;
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compounds, to quantitatively determine levels of interacting proteins or other compounds, and as therapeutic target in a whole range of disease states. Compositions comprising the novel proteins of the invention are useful for treating mammalian disorders. Polynucleotides of the invention are useful in genome and physical mapping, in positional cloning of are useful in genome and physical mapping, in positional cloning of genes, to tag or identify an organism, and for the diagnosis and treatment of mammalian diseases which is the consequence of inappropriate expression of kinase genes. They are useful for promoting immune response as part of a vaccine or anti-cancer treatment, as target for cancer treatment, as immunoregulatory and anti-inflammatory molecule, as canti-cancer treatment, and as a target for antagonists in the treatment of anti-cancer treatment, and as a target for antagonists in the treatment of diseases such as asthma and allergy. They are also useful to inhibit or enhance the activity of the soluble molecule that binds proteins of the invention, for tissue and neural regeneration, to promote or block the invention, for tissue and neural regeneration, to promote or block the invention sequence is a cDNA encoding bone/cartilage proteoglycan ipportant or PG-SI.
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Sequence 2305 BP; 809 A; 395 C; 391 G; 710 T; 0 other;

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Sequence 2305 BP; 809 A; 395 C; 391 G; /LU T; U Otner;	Query Match Best Local Similarity 74.3%; Pred. No. 2e-228; Matches 1747; Conservative 0; Mismatches 434; Indels 170; Gaps	6 AATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCACCAGGACTGTTT	2 AATCTGTGGAAGCAGTTTATTCCAGTATCACCCAGGA-GCAGCCACACAGAGGGTTGTA	66 GAAGGGTGTTTTTTTTTTTAAATGTAATACCTCCTCATCTTT	61 GAGGGCTGGATTTTTGTTCTTTTTTTTTTTTTTTTTTTT	110 TCTTCTTACACAGTGTCTGAGAACATTTACATTATAGATAAGTAGTACATGGTGGATAAC	121 TCTTCTTGAGGGTCT-TGAGGATACTTACATTGCAGGTTAAGTAGTACAGGGTGGATAA	170 TICTACTITIAGGAGGACTACTCTCTGACAGTCCTAGACTGGTCTTCTACACTAAGA	180 TTCTACTTTGAAGAAAACTTCTCTCTGACAAGGTTGGACTTGTACACAGG	230 CACCATGAAGAGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAACCCTTCTT	234 CAGCATGAAGGAGTATGTGATGCTACTGCTTTTGGCTGTGTGTG	290 TAGCCCTTCACACACCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGA	94 TAGCCCTTCCCACACACACTGAAGAATATGATGTTGAAGGATATGGAAGACACA	350 TGATGATGATGATGATGATGATGATGATGAGGAGACACTCTCTTTTCCAACAG	349GATGATGACGATAACGATGATGACGACAACTCTCTTTTTCCAACGA	410 AGAGCCAAGAAGCCATTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGATGTCA	396 AGAGCCAGTGAACCCTTTTTTCCCTTTCGATTTGTTTCCAACATGTCCATTTGGGTGCC	470 GIGCTATICACGAGIIGIACAIIGCICAGAIITAGGIITIGACCICAGICCCAACCAACAI	456 AIGTIACTCTCGAGTIGTTCACTGCTCTGATCTAGGTCTGACATCGGTTCCAAACAACA	530 TCCATTTGATACTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAAGAAAA	516 TCCATTTGATACTCGRATGGTTGACCTTCAAATAATAATAAATAAGGAAATTAAAGAAA	590 TGATTTTAAAGGACTCACTTCACTTTATGGTCTGATCCTGAACAACAAGCTAACGAA	576 IGACITIAAAGGACICACITICACITIAIGCICIGAIICIGAACAACAACAAGCIAACAA	650 GATTCACCCAAAAGCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAA
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<i>(- (</i>	10 TCAACTAAGTGAAATACCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGA 76
Ψ	96 CCAACTAAGTGAAATTCCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGA /3
ن -،	racaaaagacacattcaaaggaataaatgctttacaggttt 82
ω.	30 GGAAATGAGAGACCCTCTTGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGT 8
8	GAAATGAGTGCAAACCCTCTTGAGAACAACGGGATAGAACCAGGGGCATTTGAAGGGGT 87
3	90 GACGGIGTICCATATCAGAATTGCAGAACCAAAACTGACCTCAGTTCCTAAAGGCTTACC 94
w	acagtattccatatcaggatcgctgaagcaaaactaacctcaattccaaaaggcctacc 93
J1 01	ATTGGAGCTTCACTTAGATTATAATAAATTTCAACAGTGGAACTTGAGGA 10
10	010 TTTTAAACGATACAAAGAACTACAAAGGCTGGGCCTAGGAAAAAAATCACAGATAT 10
O.	CTTAAACGGTACAGGGAACTGCAAAGGCTGGGTCTTGGAAACAACAGAATCACAGATAT 105
1(70 CGAAAATGGGACTCTTGCTAACATACCACGTGTGAGAAAATACATTTGGAAAACAATAA 1
1(AAAATGGAACTTTTGCTAATATCCACGTGTGAGAGAGATACACTTGGAACACAATAA 111
1 1	4 – 4 1
	190 TICTAATICAATIGCAAGAGIGGGAGIAAAIGACTICIGICCAACAGIGCCAAAGAIGAA 12
11	
1;	50 GAAATCTTTATACAGTGCAATAAGTTTATTCAACAACCGGTGAAATACTGGGAAATGCA 13
17	236 GAAATCTTTATACAGTGCAATAAGTTTATTCAACAACCCAATGAAGTACTGGGAAATACA 12
1	310 ACCTGCAACATTTGGTTGTTTTGAGCAGAATGAGTGTTCAGCTTGGGAACTTTGGAAT 13
1.	296 ACCTGCAACATTTCGTTGTTGTTTGGCAGAATGAGTGTTCAGCTTGGGAATGTTGGAA- 13
H	370 GTAATAATTAGTAATTGGTAATGTCCATTTAATAAAAGTTCAAAAATCCCTACATTTGG 14
ਜ	355AATAATTCATGACATCCATTAAATATAAAATTCAAAAATGTATACATTTGG 14
	430 AATACTTGAACTCTATTAATAATGGTAGTATTATATATACAAGGAAATATCTTTCTCAA 14
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Ä	670 CGGTATI
ī	611 TAGTATTTAACCCTTCATTATCAAGTCAGTCAAACAGAATTGTACTGTAAACAGAATG 1
.1	730 CTTGACTTAGCAAAATTTGTGCTCTTTCATTTGCTGTTAGAAAAAAAA
Ţ	669 CTTGACTTAGTAACATTTGTG-TCATATCTTTGCTGTTAGAAAAAAAAAA

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121 TCTTCTTGAAGAGTCT-TGAGGATACTTACATTGCAGTTAAGTAGTACAGGGTGGATAAA 179
                                                                                                                                                                      treatment of skin diseases, including skin wounds, cancer, growth defects, developmental defects and inflammatory diseases. The proteins have important roles in the induction of hair growth, cell proliferation and cell-cell interaction, in maintaining tissue integrity, in wound healing and in modulating immune responses. The present sequence is a
                                                                                                                            The present invention provides the protein and coding sequences of CDNN isolated from human, murine and rat skin cell libraries. The sequences can be used in the development of therapeutic agents useful in the
                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTTCTTACACAGTGTCTGAGAACATTTACATTATAGATAAGTAGTACATGGTGGATAAC
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                                                                                                                                                                                                                                                                                                                                                                6 AATCTGTGGGGGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACTGTGTT
                           polynucleotides
                         New polynucleotides and polypeptides encoded by the polynucleotides isolated from skin cells, useful for treating skin wounds, cancers, growth and developmental defects, inflammatory diseases, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAGCCCTTCCCACACACACTGAAGAATATGATGTTGAAGGATATGGAAGACACA-
                                                                                                                                                                                                                                                                                                        DB 24; Length 2305;
                                                                                                                                                                                                                                                                                                                         28;
434; Indels 170;
                                                                                                                                                                                                                                                                          Sequence 2305 BP; 809 A; 395 C; 391 G; 710 T; 0 other;
                                                                                                                                                                                                                                                                                                     Score 11:36.6; DE
Pred. No. 2e-228;
0; Mismatches 43
                                                                                                Claim 1; Page 359; 466pp; English
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 74.3%;
Matches 1747; Conservative
                                                                        modulating immune responses
                                                                                                                                                                                                                                                the invention
P-PSDB; ABB72356.
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               CAGTAATGTGAAGAGTGCATTACACTATTCTTATTCTTT---AGTAACTTGGGTAGTACT 1846
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            duman; rat; mouse; skin cell; skin wound; cancer; growth defect; developmental defect; inflammatory disease; dermatological; vulnerary; lmmunomodulator; anti-inflammatory; cytostatic; neuroprotective; gene;
                                                                                                                                                                                                      ------TTCACAGATAATATTCATCAGAGTTGGTTT-GGGCTATAACACATG
                                                                                                                                                                                                                                               2027 CTTTTTTTTTTTTATTATTACCTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCA
                                                                                                                                                                                                                                                                             AATATCTTTTTAAATTATTAACTGGCTATAAAATTGTAAAAATATATGACTGCTAATA
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                                        CAGCATITIGAAGAGTACATATATITITAGTAGTTTTTTAAAAAAACTTGGACAGTACT
                                                                       GTAATATTTTTAATCATCTTAAAGTATGATTTGATATAATCTTATTGAAATTACCTTATC
                                                                                                                               ATGTCTTAGAGCCCGTCTTTATGTTTAAAACTAATTTCTTAAAATAAAGCCTTCAGTAAA
                                                                                                                                                                                        TGTTCATTACCAACTTGATAAATGCTACTCATAAGAGCTGGTTTGGGGCTATAGCATATG
                                                                                                  Kumble
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710 TCAACTAAGTGAAATACCACTTAATCTTCCCAAATCATAGCAGAACTCAGAATTCATGA 769 111111111111111111111111111111111111		TTTAAACGATACAAAGAACTACAAAGGCTGGGCCTAGGAACAAAATGGAACTTGAAGATTTTAAACGATACAAAGAACTACAAAAGGCTGGGCCTAGGAACAAAAAATGGAACTTAAAACGAAAAAAAGGTTTGGAAAAAAAA	ACTAMANAANICCCITCAGGNITACCAGAGTIGAANIACCTCCAGARACTCTTCCTTCA 111111111111111111111111111	1310 ACCTGCAACATTTCTTGTGTGTTTTGACCAATGACTTCGGAACTTTCGAAT 1369 1310 ACCTGCAACATTTCTTTTTTTTTTTTTTTTTTTTTTTTT	1430 AATACTTGAACTCTATTAATAATGGTAGTATTATATATACAAGCAAATATCTGTTCCCAA 1489	1550 TGATACATAAGGGGTTGAGAACAAGCATCTATTGCGGTTTTTGCGTACAAAT 1609	1670 CGGTATTTAACACTTTGTTATCAACCACATTTAAAAAGAACTGTACTGTAAATGGAATG 1729

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                                                                                                                                                                                                                                                                                                                      susceptibility indicators or tumour markers for anti-cancer agents. The gene information for diagnosing prognosis is related to factors similar
                                                                     human neuroblastoma. The nucleic acids are applicable as a probe or primer in diagnosing the prognosis of human neuroblastoma, malignancy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCCTTCAGGATTACC-AGAGTTGAAATACCTCC-AGATAATCTTCCTTCATCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATTCTAATT
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                                                                                                                                                                                                                           DB 22; Length 896;
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                                                                                                                                                                                    Sequence 896 BP; 340 A; 169 C; 162 G; 216 T; 9 other;
                                                                                                                                                                                                                       32.2%; Score 790.2; DB 22; 96.8%; Pred. No. 5.3e-156; tive 0; Mismatches 25;
                                                      invention relates to novel genes
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                 Claim 1; Page 377; 2979pp; Japanese.
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The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Hurington's disease, amyotrophic lateral sclerosis, and Shy Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence data for this patent did not form part of the printed
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                                                                                                                                                                                                                                                                                                                                                                                                                     peripheral nervous system; neuropathy; central nervous system; CNS; Alzhebimer's; Parkinson's disease; haemostatic; amyotrophic lateral sclerosis; Shy-brager Syndrome; chemotactic; chemotactic; chemotactic; chemotactic; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acids and polypeptides, useful for treating disorders
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Yang Y,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 785.6; DB 22;
Pred. No. 4.7e-155;
                                                                                                                                                                                                                                                                                                                                                                                                 cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liu C, Asundi V, Chen R, Ma Y,
Wang Z, Wehrman T, Xu C, Xue AJ,
Zhou P, Goodrich R, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 5282; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   such as central nervous system injuries
                                                                                                                                                                                                                                                                                                                                                                                                 nootropic; immunosuppressant;
                                                                                                                                                                                                                                                                                                                                         Human polynucleotide SEQ. ID NO 5282
                          857 AATAATIGGGAATGTCCANTTA 878
2000US-048B725.
2000US-0552317.
2000US-0598042.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.0%;
98.8%;
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2000US-0653450
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2000US-0693036
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Local Similarity
                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Leukaemia; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-AUG-2000;
14-SEP-2000;
19-OCT-2000;
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09-JUL-2000;
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                                                                                                                                                                                                                                                                                  22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUL-2000;
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Zhao QA,
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                                                                                                                                                                   AA161293
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Yamamoto

Τ;

EP1074617-A2

Gaps

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Indels

Mismatches

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Conservative

804;

Matches

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to the complementary strand of a polynuclectide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprising a sequence complementary to the polynucleotide which comprises a 1'-end sequence. The comprises at least 15 nucleotides and the combination of the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length coMAs. The primers are also useful for the particularly full-length coMAs. The primers are also useful for the chetction and/or diagnosis of the abnormality of the proteins encoded by the full-length coMAs. The primers also wobtaining of the full-length coMAs easily without any specialised methods. AAH03166 to AAH13628 and AAH03633 to AAH0364246 to AAH13632 represent human amino acid sequences; AAH03442 to AAH13632 represent human amino acid sequences; and AAH13639 to AAH13632 represent colligonucleotides, all of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                            The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-dT primer and an oligonucleotide complementary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTTTGTGCTCTGCCAAACCCTTCTTAGCCCTTCACACATCGCACTGAAGAATATGAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTTTGTGCCTCCTGCCAAACCCTTCTTTAGCCCTTCACACATCGCACTGAAGAATATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGATGATGATGATGAGGACAACTCTTTTTCCAACAAGAGGCCAAGAAGCCATTTTT
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Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 854 BP; 281 A; 166 C; 162 G; 242 T; 3 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 774.8; DB 22;
Pred. No. 8.8e-153;
0; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID 16124; 2537pp + CD ROM; English
                                                                                                                                                                                                                   Α,
                                                                                                                                                                                                   Hayashi K,
A, Nagai K
                                                                                                                                                                                                                 Wakamatsu
                                                                                                                                                                                                  sogai T, Nishikawa T,
Sugiyama T, Wakamatsu
                                                                                               99JP-0300253.
2000JP-0118776.
2000JP-0183767.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31.6%;
96.9%;
                                                        2000EP-0116126
                                                                                                                                          2000JP-0241899
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804; Conservative
                                                                                                                                                                        (HELI-) HELIX RES INST
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                                                                                                                                                                                                     Isogai T,
                                                                                                                                                                                                                                                                                                                    full-length cDNAs
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02-MAY-2000;
                                                                                                                                          09-JUN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                             480
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                                                                                                                                                                                                     CTACTCTCTTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGGAGTATG
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                            ATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACTGTTG
                                                     ATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCAGGACTGTTG
                                                                                     TGAGAACATTTACATTATAGATAAGTAGTACATGGTGGATAACTTCTACTTTTAGGAGGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human cDNA clone (5'-primer) SEQ ID NO:16124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH16847 standard; cDNA; 854
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TGATGATGATGATGAGGACAACTCTTTTTTCCAACAAGAGGCCAAGAAGCCATTTTTT	TCCATTGATCTGTTCCAATGTGTCCATTTGGATGTCAGTGCTATTCAGGAGTTGTACA			ACTITATGGTCTGATCCTGAACAACAACGAAGGTAACGAAGATTCACCCAAAAGCCTTTCT 	AACCACAAAGAAGTIGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTGAAATACCACT 	. Taatcttcccaatcattagcagaactcagaattcatgaaaataaagttaagaaaataca 	AAAGGACACATTCAAAGGAATGATGCTTTACACGTTTTGGAAATGAGTGCAAACCCTCT	TGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGACGGTGTCCATATCAGAAT	TGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTTAT 960
241	431	491	551	611	671 541	731	791	851	911
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Search completed: May 31, 2003, 10:54:25 Job time : 563 secs

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AW450923 UI-H-BI3-
BF056897 7k11d05.x
AL598934 DKFZp313F
AW955638 EST367708
AL135736 DKFZp5860
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayshizaki, Y. Normalization and subtraction of cap-trapper selected CDNAs to prepare full-length cDNA libraries for rapid discovery of new genes
                                                                                                                                                                                                                                                                             AW338706 ha64d03.x
BF108809 7164a06.x
AL135737 DKF2p5860
AL657039 tt49d03.x
AL65987 q297e03.x
AL493987 q297e03.x
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AI862037 tw71a05.x
AI240315 qi14c02.x
BE049606 xw91b10.x
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AW237808 xm81g12.x
AI539334 te45g09.x
AI370866 ta63h10.x
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AW002412 wu61f07.x
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BE633222 uv74d03.y
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BF823517 MR1-RT003
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BE374603 601225391
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                          AI655462 ttl3a07.x
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AI006670 ue16b10.y
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AI277357 qm54b03.x
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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20499374
11042159
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                                                                AL598934
AW955638
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AW192703
BC022059
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Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Suni,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Wamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watchiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. SHIKEN integrated sequence analysis (RISA) system-:384-format General Risk in 1757-1771 (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prepare mouse tissues. First strand cDNA was primed with a primer [5, GAGAGAGAGAGAGACCAAGAGCTCTTTTTTTTTTTTTTVN 3'], cDNA was
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                          MEDLINE
                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
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with BamHI and XhoI. cDNA of size comprised longer than 7 kb was selected before cloning. Vector: a modified pBluescript KS(+) after bulk excision from Lambda FLC I. Cloning sites, 5' end: SalI; 3' end: BamHI. Host: DH10B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="MGD:MGI:1913945"
/translation="MKEYVMLLLAVCSAKPFSPSHTALKNMMLKDMEDTDDDDNDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DDNSLFPTKEPVNPFFPFDLFPTCPFGCQCYSRVVHCSDLGLTSVPNNIPFDTRMYDL
QNNXIKEIKENDFKGLTSLYALILNNNKLTKIHPKTFLTTKKLRRLYLSHNQLSEIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLPKSLAELRIHDNKVKKIQKDTFKGMNALHVLEMSANPLENNGIEPGAFEGVTVFHI
                                                                                                                                                                                                                                                                                                                /tissue_type="skin"
/clone_lib="RIKRN full-length enriched mouse cDNA library"
/dev_stage="0 day neonate"
1. .2302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---TTTTTTTTTTAAATGTAATACCTCCTCA 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192 ATAAATTCTACTTTGAAGAAAACTTCTCTCTCTGACAAGGTTGGACTTGTACAC. --- 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247 -AGGCCAGCATGAAGGAGTATGTGATGCTACTGCTTTTGGCTGTGTGCTCTGCCAAACCC 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTTTTCTTACACAGTGTCTCTGAGAACATTTACATTATAGATAAGTAGTACATGGTGG 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TICITIAGCCCTTCCCACACACACTGAAGAATATGATGTTGAAGGATATGGAAGACACA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGATGATGATGATGATGATGATGATGATGATGATGAGGACAACTCTCTTTTTCCA 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           405 ACAAGAGGCCAAGAAGCCATTTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGA 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 GGACTAATCTGTGGAAGCAGTTTATTCCAGTATCACCCAGGA-GCAGCACACAGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165 ATAACTTCTACTTTTAGGAGGACTACTCTCTTGACAGTCCTAGACTGGTCTTCTACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAAGACACCATGAAGGAGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               285 ITCTTTAGCCCTTCACACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          data source: MGD, source key: MGI: 1913945, evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11; Length 2302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1134.8; DB 11; Length 2302
Pred. No. 1.6e-208;
0; Mismatches 437; Indels 171;
                                                                                                                                                                                                         /db_xref="FANTOM_DB:4631401G09"
/db_xref="MGD:MGI:1894526"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="BAB29402.1"
/db_xref="GI:12852407"
                                                                                                                                     1. ..2302
/organism="Mus musculus"
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                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                             /clone="4631401G09
                                                                                                                                                                                      /strain="C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="putative"
398 c 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="asporin
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llarity 74.2%;
Conservative (
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/gene="Aspn"
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255. .968
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/gene="Aspn"
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96

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/clone="IMAGE:5864192"
/clone="IMAGE:5864192"
/clone=lib="NCI_CGAP_DTO"
/tissue_type="Metastatic Chondrosarcoma"
/dev_stage="Adult"
/lab_host="DH10B (Life Technologies)"
/note="Organ: Lung: Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I: modified polylinker; Site_1: EcoR I; Site_2: Not I: Not_CGAP_DTO is a CDNA library containing the following tissue(s): Metatastic Chondrosarcoma in Lung. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded CDNA was ligated to an EcoR I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM992531 672 bp mRNA linear EST 17-JUN-2002 UI-H-DTO-att-K-09-0-UI.s1 NCI_CGAP_DTO Homo sapiens cDNA clone IMAGE:5864192 3', mRNA sequence.
2195 GATATCCCTTTGGAAGACCTTGCTTGGAAGAGCCTGGACACTAACAATTCTACACAAAT 2254
                                                                                                                                            Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.B. Consortium/LLNL at: http://image.llnl.gov
POLYA-Yes.
                                    adaptor, digested with Not I, and cloned directionally into pTTT-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 672)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                         2315 AAGCAGAGCATCAAATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGTTC
                                                                                                                                                                                                                                                                                                                                          2375 TTATGAATTCTTATTGGCATTCAACAFATGTAAAATCAGAAAA-CAGGGAAATTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95 TTTATGTATTTCTTATTGGCATTCAACATATGTAAAATCAGAAAACCAGGGAAATTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (dT)18 tail. The sequence tag for this library is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAG_TISSUE=lung metatastic chondrosarcoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifier's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2434 TTAAAAATATTGGTTTGAAAT 2454
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAG_LIB=UI-H-DTO
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BM992531.1 GI:19711920
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AUTHORS
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/ Organism="Homo sapiens"

/ Ob xref="taxon:9666"

/ Clone="IMAGE:5841348"

/ Clone=lib="Not_CGAP_EIO"

/ Lissue_type="Chondrosarcoma"

/ dev_stage="Adult"

/ dev_stage="A
                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
POLYA-Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1775 CAGAATTAACAAAGACAGTAATGTGAAGAGTGCATTACACTATTCTTATTCTTTAGTAAC 1834
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1075 TGTAGTGTTTCATAAAATCTGTAACTCGCATTTTAATGATCCGCTATTATAAGCTTTTAA 2134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1895 AATTACCTTATCATGTCTTAGAGCCCGTCTTTATGTTTTAAAACTAATTTCTTAAAATAAA 1954
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1955 GCCTTCAGTAAATGTTCATTACCAACTTGATAAATGCTACTCATAAGAGCTGGTTTGGGG 2014
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                335 TAGCATGAAAATTGTTAGGCTATATAACATTGCCACTTCAACTGTAAGGAATATTTTGA 276
    National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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Pred. No. 3.6e-118;
O; Mismatches 2;
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TAG_SEQ=ACACTTGCAC"
100 c 104 g 251
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Best Local Similarity 99.6%;
Matches 678; Conservative
                                        Tumor Gene Index
Unpublished (1997)
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/dev_stage="Adult"
//dev_stage="Adult"
//note="Organ: leiomios; Vector: pucl8; Site_1: SmaI;
//note="Organ: leiomios; Vector: pucl8; Site_1: SmaI;
//note="Organ: leiomios; Vector: pucl8; Site_1: SmaI;
//note="Organ: leiomin: library was made by cloning products
derived from ORESTES PCR (U.S. Letters Patent application
No. 196,716 - Ludwig Institute for Cancer Research)
profiles into the pUC 18 vector. Reverse transcription of
tissue mRNA and cDNA amplification were performed under
low strings conditions."
138 c 122 g 170 t
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                   Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=RC3&t2=RC3-LT0023-
200100-012-c10&t3=2000-01-20&t4=1)
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Pred. No. 6.8e-108;
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                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="LT0023"
                                                                                                                                                               High quality sequence start: 13
High quality sequence stop: 634.
Location/Qualifiers
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95.9%;
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                                                                                                                                                                                                                                               TAATCATCTTAAAGTATGATTGATATAATCTTATTGAAATTACCTTATCATGTCTTAGA 1916
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
I (bases 1 to 695)
HCGP http://www.ludwig.org.br/ORESTES.
The FAPESP/LICR Human Cancer Genome Project
Unpublished (1999)
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
Brazil
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RC3-LT0023-200100-012-c10 LT0023 Homo sapiens cDNA,
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AUTHORS
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1907 ATGTCTTAGAGCCCGTCTTTATGTTTAAAACTAATTTCTTAAAATAAAGCCTTCAGTAAA 1966
                                                                         TGTTCATTACCAACTTGATAAATGCTACTCATAAGAGCTGGTTTGGGGCTATAGCATATG 2026
                                                                                                                                                                                                                          TAAAATCTGTAACTCGCATTTTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAAT 2146
                                                                                                                                                                                                                                                                                                                                                                          GAAGACCTTGCTTGGAAGAGCCTGGACACTAACAATTCTACACCAAATTGTCTCTTCAAA 2266
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                 TGTTAGGCTATATAACATTGCCACTTCAACTCTAAGGAATATTTTTGAGATATCCCTTTG 267
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST (Wambutt,R., Heubner,D., Mewes,H.W., Weil,B. and Wiemann,S.)
Unpublished (1999)
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6, 14059
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This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
                                                                                           CTTTTTTTTTTTTAATTATTACCTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCA
                                                                                                                                                                                                                                            TGTTAGGCTATATAACATTGCCACTTCAACTCTAAGGAATATTTTGAGATATCCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Research Center (DKF2); Email s.wiemann@dkfz-heidelberg.de; sequenced by AGOWA (Berlin/Germany) within the cDNA sequencing consortium of the German Genome Project.
                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 592)
Wambutt,R., Heubner,D., Mewes,W., Weil,B. and Wiemann,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No s1 sequence available.
This clone (DKFZp313E0538) is available at the RZPD in
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Location/Qualifiers
1. 592
/organism="Homo sapiens"
/db_xref="taxon:9606"
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UI-H-EZ1-baz-i-13-0-UI.S1 NCI_CGAP_Ch2 Homo sapiens cDNA clone
UI-H-EZ1-baz-i-13-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library preparation: Dr. M. Bento Soares, University of Iowa cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone distribution information can be obtained
                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Steven Gitelis/ Rush Presbiterian, Dept. of
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 626)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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The following repetitive elements were found in this cDNA
sequence: 1-48, >AT_rich#Low_complexity (matched compliment)
POLYA-Yes.
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/db_xref="taxon:9606"
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National Institutes of Health, Mammalian Gene Collection
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0; Mismatches 2;
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Susan L. Sullivan,
/clone="DKFZp313E0538"
/clone_lib="313 (synonym:
/dev_stage="adult"
/lab_host="DH10B"
                                                 /note="Vector: pTriplEx2;
cDNA-collection"
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/note="Organ: olfactory epithelium; Vector:
pCNV-SPORT6.1.ccdb; Site_1: EcoRV; Site_2: Not1; Cloned
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2.2 kb. Constructed by ResGen, Invitrogen Corp. Note: this
is a NIH MCC Library.
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cDNA Library Preparation: ResGen, Invitrogen Corp

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: The I.M.A.G.E. Consortium

Clone distribution: MGC clone distribution information

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAMI371 row: g column: 13

High quality sequence stop: 710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 926,
                                                                                                                                                                                                                                                                                                                                                                                                                     others
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                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="ImAGE:6313764"
/clone_lib="NIH_MGC_129"
/lab_host="DH10B_(phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 585.2; DB 14;
Pred. No. 1.1e-102;
0; Mismatches 120;
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                                                                                                                                                                                                                                                                                                                                                                                                                     272
                                                                                                                                                                                                          /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                   is a NIH_MGC Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 23.8%;
Local Similarity 82.1%;
les 750; Conservative
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5;

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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. cDNA Library Preparation: M.B. Soares Lab Clone distribution: NCI-CGAP clone distribution information can be found through the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 17-FEB-2000
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                                                                                                                          CACTGAAGAATATGATGCTGAAGGATATGGAAGACACA-----GATGATGATGATGATG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541 CTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAA--GAAAATGATTTTAA 598
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       568 bp mRNA linear EST 17-FEB-2
UI-H-BI3-all-f-02-0-UI.sl NCI_CGAP_Sub5 Homo sapiens cDNA clone
IMAGE:2737275 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                          247 IGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTTAGCCCTTCACACATCG
                                                                                                                                                                                                                          ATGATGATGATGATGATGATGAGGACAACTCTCTTTTTCCAACAAGAGGAGCCAAGAA
                                                                                                                                                                                                                                                                                                                          GCCATTTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGATGTCAGTGCTATTCAC
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/lab_host="DH10B" (Life Technologies)"
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www-bio.llnl.gov/bbrp/image/image.html
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/db_xref="taxon:9606"
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Unpublished (1997)
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                                                                                                  793
                                                                                                                                                    911
                                                                                                                                                                                                                                                                        AAGGGTGTTTTTTTTTTTAAATGTAATACCTCCTCATCTTTTCTTTTACACAGTGTC 126
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AATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGATAATANAGTTAAGAAGATACAA 733
                                                 851
                                                                                                                                                                                                                                               912 GCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCACCAACTTTATTGGAGCTTCAC 971
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EST373609 MAGE resequences, MAGG Homo sapiens CDNA, mRNA sequence.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Hegde,P., Qi,R., Abernathy,K., Dharap,S., Gaspard,R., Gay,I.E., Saeed,A.I., Sharov,V., Lee,N.H., Yeatman,T.J. and
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microarray
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Tochact: John Quackenbush
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850,
Fax: 301 838 9208
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/db_xref="taxon:9606"
/clone_lib="MAGE resequences, MAGG"
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Plate: 160
                                                                                                                                                                                                                                                                                                                                               972 TTAGATTATAATAA 985
                                                                                                                                                                                                                                                                                                                                                                         912 TTAGATTTTTATAA 925
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                            (IMAGE CloneIDS 132912-132831, 1471368-1472903, 18712-1872)

(IMAGE CloneIDS 132912-132831, 1471368-1472903, 189121834 (IMAGE CLONEIDS 141420-4147991, 1520904-1522439, 18012.064-100105 1414920-4147991, 1520904-1522439, 18012.064-100105 1414920-4147991, 1520904-1522439, 18012.064-101 1 LLAM 3164-3167, 316-3720, 147592-1476743; NCI CGAP_PC2 pool 1 LLAM 2457-2459, 2758-2759, 3062-3068 (IMAGE CLONEIDS 985608-986759, 101192-1101959, 1217928-1220615; NCI CGAP_CO10 pool 1 LLAM 2644-2653, 2811-2872 (IMAGE CLONEIDS 1057416-1061255, 1144584-1145351). (10% of the driver population), plus a pool of 3,840 arrayed clones from NCI CGAP_Sub1 (IMAGE CloneIDS 2708616-2710535) and NCI CGAP_Sub2 (IMAGE CLONEIDS 2708616-2710535) and NCI CGAP_Sub2 (IMAGE CLONEIDS 270816-2710535) (10% of the driver population), plus a pool of 1,136 clones from NCI CGAP_Sub3 (IMAGE CLONEIDS 2712456-2723591) (10% of the driver population), subtraction was performed as previously described (Bonaldo, Lennein & Sapers (1996); Normalization and Subtraction:
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Research 6, 791-806
1322376-1323911, 1456008-1456775,1500552-1502855);
                     __CGAP__Kid5 pool 1 LLAM 3338-3342,3722-3725,
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tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 555; DB 10;
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TAG_TISSUE=kidney
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/note="Vector: pT713D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Plasmid DNA from the normalized library NCI_CGP_GC4 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1257096-1258631, 1469064-1470983, and 1475592-1476743). Subtraction by Bento Soares and M. Fatima Bonaldo. " 81 c 92 g 197 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bonaldo, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL, send email to:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2019
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BF056897 S60 bp mRNA linear EST 16-OCT-2000 7klld05.xl NCI_CGAP_GC6 Homo sapiens CDNA clone IMAGE:3444128 3',
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                                                                                                                                                                                                                                    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 560)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs r@mail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D., Ph.D., Michael
R. Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1900 CCTTATCATGTCTTAGAGCCCGTCTTATGTTTAAAACTAATTTCTTAAAATAAAGCCTT
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Pred. No. 1.6e-96;
0; Mismatches 1; Indèls 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="pooled_germ cell tumors"
/lab_host="DH10B"
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3444128"
/clone=lib="NCI_CGAP_GC6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       info@image.ilnl.gov
Seq primer: -400P from Gibco
High quality sequence stop: 466.
Location/Qualifiers
                                                                                                                                   BF056897.1 GI:10810793
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Best Local Similarity 99.8%;
Matches 554; Conservative
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Unpublished (1997)
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AW955638 591 bp mRNA linear EST 01-JUN-2000 EST367708 MAGE resequences, MAGD Homo sapiens CDNA, mRNA sequence. AW955638
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                                                                    Gaspard, R., Gay, C., Holt
atman, T.J. and
                61 ATGATGATGATGATGATGATGATGATGATGATGATGAGGACAACTCTCTTTTTCCAA 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Assessment of gene expression patterns in a model of colon tumor metastasis using a 19,200 element cDNA microarray Unpublished (2000)
                                                                                                                                                                                                           CAAGAGAGCCAAGAAGCCATTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGAT
                                                                                                                     466 GTCAGTGCTATTCACGAGTTGTACATTGCTCAGATTTAGGTTTGACCTCAGTCCCAACCA
                                                                                                                                                                                       526 ACATTCCATTTGATACTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAAG
                                                                                                                                                                                                                                                              586 AAAATGATTTTAAAGGACTCACTTCACTTTATGGTCTGATCCTGAACAACAACAAGTAA
                                                                                                                                                                                                                                                                                                                               646 CGAAGATTCACCCAAAAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCC
                                                                                                                                                                                                                                                                                                                                                 Catarrhini; Hominidae;
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Hegda, P., Qi, R., Abernathy, K., Dharap, S., Gaspard, R., J. E., Saeed, A. I., Sharov, V., Lee, N. H., Yeatman, T. J., Quackenbush, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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Tel: 301 838 3528
Fax: 301 838 0208
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No. 5.9e-96;
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/clone_llb="MGE resequences,
/note="Vector: pBluescriptSkm"
87 c 79 g 229 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The Institute for Genomic Research
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW955638.1 GI:8145321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: johng@tigr.org
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97.8%;
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Seq primer: Reverse
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
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KEYWORDS
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                                                                                                                                                                       GAGCATCAAATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTAT 2379
                                                                                                                                                                                                                                          2380 GTATITCTIATIGGCATICAACATATGTAAAATCAGAAAACAGGGAAATTTTCATTAAAA 2439
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                                                                201
                                                                                                                     286 TCTTTAGCCCTTCACACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAG 345
320 TGAAAATTGTTAGGCTATATAACATTGCCACTTCAACTCTAAGGAATATTTTAAGATAT 261
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1 (Dases 1 to 553)
Wambutt,R., Heubner,D., Mewes,W., Weil,B. and Wiemann,S.
Est (Wambutt,R., Heubner,D., Mewes,H.W., Weil,B. and Wiemann,S.)
Contact: Wambutt R
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6, 14059
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This is the 5' sequence of the clone insert
Clone from S. Witemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email S.wiemann@dkfz- heidelberg.de;
sequenced by AGGWA (Berlin/Germany) within the cDNA sequencing
consortium of the German Genome Project.
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/note="Vector: pTriplEx2; Site_1: SfiIA; Site_2: SfiIB;
cDNA-collection"
                                2260 CTTCAAATACGTATGGACTGGATAACTCTGAGAACACATCTAGTATAACTGAATAAGCA
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Mismatches 0; Indels
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/clone_lib="313 (synonym: hlcc2)'
/dev_stage="adult"
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/organism="Homo sapiens"
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DKFZp58600417_r1 586 (synonym: hutel) Homo sapiens cDNA clone
DKFZp58600417 5', mRNA sequence.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 529)
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This clone (DKE2p58600417) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
Location/Qualifiers
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Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz-heidelberg.de;
sequenced by BMFZ [blomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the Gen
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EST (Koehrer, et al.)
Unpublished (1999)
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Homo sapiens CDNA clone IMAGE:2678094 3',
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Primates; Catarrhini; Hominidae;
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Pred. No. 1.6e-91;
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Life Technologies catalog #: 11548-013
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="DkT2p58600417"
/clone_lib="586 (synonym: hu
/tissue_type="uterus"
/dev_stage="adult"
/lab_host="DH108"
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88 c 76 g 18
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mRNA sequence.
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Mammalia; Eutheria;
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Unpublished (1997)
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Clone distribution: MGC clone distribution information can be found
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300 CACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACA---GATGATGATGAT 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAAGCCATTTTTTCCATTTGATCTGTTCCAATGTGTCCATTTGGATGTCAGTGCTAT 476
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                                                                                                                                                                                                                                                                                                                                                                                                   through the I.M.A.G.E. Consortium/LLNL at; http://image.llnl.gov
Series: IRAL Plate: 38 Row: o Column: 2
This clone was selected for full length sequencing because it
passed the following selection criteria: Hexamer frequency ORF
                                                                                            Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15 GAGTATGTCTCTATTATTCCT-GCTTTGTGCTCTGCCAAACCCTTCTTAGCCCTTCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 AGGAGGACTACTCTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contact: amadan@systemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anurac
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
   Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                           Tissue Procurement: CLONTECH cDNA Library Preparation: CLONTECH Laboratories, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Institute for Systems Biology http://www.systemsbiology.org
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This clone has the following problem: frame shifted
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                                                                             of
                                                           Direct Submission
Submitted (22-JAN-2002) National Institutes
                                                                                                                                                    NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
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118 c 116 g 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="NIH_MGC_76"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:4714902"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="Liver"
                                                                                                                                                                       Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /lab_host="DH10B"
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97.18;
   Eutheria;
                       to 603)
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                                         Strausberg, R.
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ORIGIN
                                                       TITLE
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                                                                                                                                                                                                                                                                  /note."Organ: pancreas; Vector: pCMV-SPORT6; Site_1: Salf; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dr. Average insert size 1.72 kb. Life Technologies catalog #:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2050
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
DNA Sequencing by: Washington University Genome Sequencing Cente
Clone distribution: NCI-CGAP clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1931 TTAAAACTAATTTCTTAAAATAAAGCCTTCAGTAAATGTTCATTACCAACTTGATAAATG
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                                                                                                                                                                                                                                                                                                                                                                                                     Score 522.4; DB 10; Length 533;
Pred. No. 1.5e-90;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BC022059 mRNA linear H7
Homo sapiens, Similar to asporin (LRR class 1), clone
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                                                                                                                                                                   db_xref="taxon:9606"
/clone="INAGE:2678094"
/clone=lib="NCI_CGAP_Pan1"
/tissue_type="adenocarcinoma"
/lab_host="DH108"
                                                     www-bio.llnl.gov/bbrp/image/image.html
Seg primer: -400P from Gibco
High quality sequence stop: 415.
Location/Qualifiers
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                                                                                                                                                    /organism="Homo sapiens"
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99.8%;
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SOURCE
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Search completed: May 31, 2003, 13:38:00 Job time : 3455 secs g

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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC

TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P2548P1C1

CURRENT APPLICATION NUMBER: US/09/944,413

CURRENT FILING DATE: 2001-09-26

PRIOR FILING DATE: 2001-06-26

PRIOR FILING DATE: 2001-06-26

PRIOR PLING DATE: December 3, 1997

PRIOR PLING DATE: December 1, 1997

PRIOR PLING DATE: December 11, 1997

PRIOR APPLICATION NUMBER: 60/069,278

PRIOR APPLICATION NUMBER: 60/069,425
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her 16, 1997
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Patent No. US20020156004A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin
APPLICANT: Botstein, David
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Filvaroff, Ellen
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Goddard, Audrey
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Hillan, Kenneth
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                                                                                           May 31, 2003, 10:41:47; Search time 343 Seconds (without alignments) 9646.904 Million cell updates/sec
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1. /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
2. /cgn2_6/ptodata/1/pubpna/US06_MEW_PUB.seq:*
3. /cgn2_6/ptodata/1/pubpna/US06_MEW_PUB.seq:*
4. /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
5. /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
6. /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
7. /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
8. /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
9. /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
9. /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
10. /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
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ALIGNMENTS

1020 180 240 AGTGTCTGAGAACATTTACATTATAGATAAGTAGTACATGGTGGATAACTTCTACTTTTA 180 420 480 480 540 540 9 9 99 99 720 780 780 840 900 960 9 GTGTTGAAGGGTGTTTTTTTTTTTAAATGTAATACCTCCTCATCTTTTCTTACAC AGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTAGCCCTTCAC CTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAAGAAAATGATTTTAAAG GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCAGGACT GGAGGACTACTCTTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGG AGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTTAGCCCTTCAC AAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTG **ACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGATGATGATG** ATGATGATGATGATGATGATGAGGACACACTCTTTTTCCAACAAGAGAGCCAAGAA GCCATTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGATGTCAGTGCTATTCAC GACTCACTTCACTTTATGGTCTGATCCTGAACAACAACAAGCTAACGAAGATTCACCCAA 661 AAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTG ATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTATAT ATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCCAACTTTAT TGGAGCTTCACTTAGATTATAAAAATTTCAACAGTGGAACTTGAGGATTTTAAACGAT AAATACCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGAAAATAAAGTTA AGAAAATACAAAAGGACACATTCAAAGGAATGAATGCTTTACACGTTTTGGAAATGAGTG CAAACCCTCTTGATAATAGAGGCATAGAGCCAGGGGCATTTGAAGGGGTGACGGTGTTCC <u> ACAAAGAACTACAAAGGCTGGGCCTAGGAAACAACAAAATCACAGATATCGAAAATGGGA</u> 241 301 61 121 301 361 181 361 421 421 481 481 541 601 721 721 781 841 901 961 196 1021 1021 1081 661 901 g qq g g ò 셤 ò a ò οy a g g ò δ Q οy g ò qq ó 셤 à g ò pp δ g ò g

> ö GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACT Gaps ö Indels ö Best Local Similarity 100. Matches 2454; Conservative -

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Qy 2221 GAAGACCTGGACACTAACAATTCTACCCAAATTGTCTCTTCAAATACGTATGGACTGG 2280	3-1 , A US FOR : B	APPLICANT: Filvaroit, Ellen APPLICANT: Goddard, Audrey APPLICANT: Goddard, Audrey APPLICANT: Godowski, Paul APPLICANT: Grimaldi, Christopher APPLICANT: Grimaldi, Christopher APPLICANT: Hillan, Kenneth APPLICANT: Kljavin, Ivar APPLICANT: Napier, Mary APPLICANT: Napier, Mary APPLICANT: Applicanted	APPLICANT: Wood, William TITLE, OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE, OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P2548PLC1 CURRENT APPLICATION NUMBER: US/09/944,403 CURRENT FILING DATE: 2001-09-26 PRIOR APPLICATION NUMBER: 09/866,028 PRIOR APPLICATION NUMBER: 06/067,411 PRIOR FILING DATE: December 3, 1997 PRIOR FILING DATE: December 11, 1997 PRIOR PRILOR OBSTE: December 11, 1997	PRIOR FILING DATE: December 11, 1997 PRIOR PELICATION NUMBER: 60/069,425 PRIOR RELIGION NUMBER: 60/069,425 PRIOR APPLICATION NUMBER: 60/069,696 PRIOR FILING DATE: December 16, 1997 PRIOR APPLICATION NUMBER: 60/069,694 PRIOR PILING DATE: December 16, 1997 PRIOR PILING DATE: December 16, 1997 PRIOR APPLICATION NUMBER: 60/069,870 PRIOR APPLICATION NUMBER: 60/069,873 PRIOR PILING DATE: December 17, 1997 PRIOR PILING DATE: December 17, 1997 PRIOR PILING DATE: December 17, 1997 PRIOR PILING DATE: December 17, 1997	APPLICATION NUMBER: 60/06 FILING DATE: December 18, APPLICATION NUMBER: 60/070 FILING DATE: January 5, 19 APPLICATION NUMBER: 60/074 FILING DATE: February 9, 1 APPLICATION NUMBER: 60/074
1141 TCCCTTCAGGATTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTC	381 TAATTGGTAATGTCCATTTAALATAAGATTCAAAAATCCCTACATTTGGAATACTTGAACTTGAACTTTAGTAATGTCATTTAATATAAGATTCAAAAATCCCTACATTTGGAATACTTGAACTTGAACTTTAATATAATAATAATAATACAAGCAAATCTACATTTGGAATACTTGAACTTTGAACTTTGAATACTTGAACTTTGATAATTGTCAAGTGGTAAGTTCTATTCTCAAGTGGTAAGTCCTTTTTTTT	1501 ACTGACTTATTTATGACAAGAAATTTCAACGGAATTTTGCCAAACTATGATACATAAG 1560 1561 GGGTTGAGAAACAAGAAATTTCAACGGAATTTTGCCAAACTATGATACATAAG 1560 1561 GGGTTGAGAGAAACAAGCATCTATTGCGTTTTTTGCGTACAAATGATCTTACATA 1620 1621 AATCTCATGACCATCCTTTTTTTTTTTTTTTTTTTTTTT	1681 ACTTGTTATCAAGCACATTTAAAAAGAACTGTAAATGGAATGCTTGGCTTAGC 1740 1681 ACTTGTTATCAAGCACATTTAAAAAGAACTGTACTGTAAATGGAATGCTTGGCTTAGC 1740 1681 ACTTGTTATCAAGCACATTTAAAAAGAACTGTACTGTAAATGGAATGCTTAGC 1740 1741 AAAATTTGTGCTCTTTCATTTGCTGTTAGAAAACAAGAATTAACAAAGAATGTGA 1800 1801 AGAGTGCATTACATTTGCTGTTAGAAAAACAAATTAACAAAAGCAGTAATGTGA 1800 1801 AGAGTGCATTACATTCTTATTCTTAGTAACTTGGGTAGTAATTTTAAT 1860 1801 AGAGTGCATTACATTCTTATTCTTAGTAACTTGGTAATTTTTAAT 1860 1801 AGAGTGCATTAAAGTATTGATTTCTTTAGTAACTTGGTAATTTTTAAT 1860 1801 CATCTTAAAGTATTGATTTGATTTCTTTAGAATTACCTTATAGAGCCC 1920 1861 CATCTTAAAGTATTGATATTATTGAAATTACCTTAATGAGCCC 1920	1 GTCTTTATGTTTAAAACTAATTTCTTAAAATAAGCCTTCAGTAAATGTT 1	2101 CGCATTTTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAATTGTTAGGCTATATA 2160

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APPLICATION NUMBER: PCT/US99/28313
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APPLICATION NUMBER: PCT/US99/28301
                                                                                                                                 OR APPLICATION UNMBER: 09/216,021
OR FILING DATE: December 1, 1998
OR APPLICATION NUMBER: 09/218,517
OR FILING DATE: December 22, 1998
OR APPLICATION NUMBER: 09/254,311
OR FILING DATE: MARCH 3, 1999
OR APPLICATION NUMBER: PCT/US99/1252
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APPLICATION NUMBER: PCT/USOO/20710
FILING DATE: July 28, 2000
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APPLICATION NUMBER: PCT/US98/25108
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NUMBER: 60/075,945
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FILING DATE: July 28, 1999
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                                                                             Sequence 1, Application US/09944896
Patent No. US20020168715A1
GENERAL INFORMATION:
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                                                                    PRIOR FILING DATE: September 15, 1999
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PRIOR FILING DATE: December 1, 1999
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PRIOR PILING DATE: December 1, 1999
PRIOR PILING DATE: PEDFUARY 11, 2000
PRIOR FILING DATE: FEBRUARY 22, 2000
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APPLICATION NUMBER: PCT/US99/28409
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APPLICATION NUMBER: PCT/US99/28301
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March 3, 1999
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ANT: Grimaldi, Chris ANT: Gurney, Austin ANT: Hillan, Kenneth ANT: Kljavin, Ivar ANT: Roy, Margaret ANT: Roy, Margaret ANT: Wood, William OF INVENTION: SECRE OF INVENTION: SECRE BEBERCE: P2548PICI NT APPLICATION UNBER	PRIOR APPLICATION NUMBER: 09/866,028 PRIOR FILING DATE: 2001-05-25 PRIOR FILING DATE: 2001-057,411 PRIOR PLICATION NUMBER: 60/067,411 PRIOR PLICATION NUMBER: 60/069,334 PRIOR FILING DATE: December 11, 1997 PRIOR PLICATION NUMBER: 60/069,335 PRIOR PLICATION NUMBER: 60/069,425 PRIOR PLICATION NUMBER: 60/069,425 PRIOR PLICATION NUMBER: 60/069,425 PRIOR PLICATION NUMBER: 60/069,696 PRIOR PLICATION NUMBER: 60/069,696 PRIOR PLICATION NUMBER: 60/069,696 PRIOR PLICATION NUMBER: 60/069,696 PRIOR PLING DATE: December 16, 1997 PRIOR PLING DATE: December 16, 1997	APPLICATION UNDBER: FILING DATE: December Deviced Date: December Deplication NUMBER: FILING DATE: Februar APPLICATION NUMBER: FILING DATE: Februar DATE: Pebruar DATE:		FILING DATE APPLICATION FILING DATE
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PRIOR FILING DATE: February 11, 2000
PRIOR FILING DATE: February 12, 2000
PRIOR FILING DATE: February 22, 2000
PRIOR PLING DATE: PEDT/USOO/06414
PRIOR PLING DATE: MAICH 2, 2000
PRIOR PLING DATE: MAICH 30, 2000
PRIOR FILING DATE: MAICH 30, 2000
PRIOR FILING DATE: MAY 22, 2000
PRIOR FILING DATE: MAY 22, 2000
PRIOR PLING DATE: MAY 22, 2000
PRIOR PLING DATE: July 28, 2000
PRIOR PLING DATE: July 28, 2000
PRIOR FILING DATE: DATE/USOO/30710
PRIOR FILING DATE: DECEMBER: PCT/USOO/30710
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Best Local Similarity 100.
Matches 2454; Conservative
            NOS: 120
                                                                 Sapien
PRIOR FILING DATE:
NUMBER OF SEQ ID NO
SEQ ID NO 1
                                                              ; ORGANISM: Homo US-09-944-907-1
                                    LENGTH: 2454
TYPE: DNA
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             AGAGTGCATTACACTATTCTTATTCTTTAGTAACTTGGGTAGTACTGTAATATTTTAAT 1860
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CURRENT FILING DATE: 2001-08-31
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Publication No. US20020198147A1
GENERAL INFORMATION:
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Godowski, Paul
Grimaldi, Christopher
Gurney, Austin
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Filvaroff, Ellen
Gerritsen, Mary
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APPLICANT: Botstein, David
APPLICANT: Eaton, Dan
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Roy, Margaret
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                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/028,072 CURRENT FILING DATE: 2001-12-19
                                                                                                                                                                                                                                     Sequence 327, Application US/10028072
Publication No. US20030004311A1
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ING DATE: 1997-09-17
LICATION NUMBER: 60/059263
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LICATION NUMBER: 60/059122
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FILING DATE: 1997-09-19
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FILING DATE: 1997-09-19
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APPLICATION NUMBER: 60/062285
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PRIOR APPLICATION NUMBER: 60/062816
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Wood,William
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Filvaroff, Ellen
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APPLICATION NUMBER: 60/079728
FILING DATE: 1998-02-27
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/080165
FILING DATE: 1998-03-31
                 APPLICATION NUMBER: 60/063082
FILING DATE: 1997-10-31
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LING DATE: 1997-11-17
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FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081229
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FILING DATE: 1997-10-29
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LING DATE: 1997-10-29
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NG DATE: 1997-10-17
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LING DATE: 1997-11-24
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PPLICATION NUMBER: 60/072320
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ILING DATE: 1998-02-04
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APPLICATION NUMBER: 60/077791
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ILING DATE: 1998-03-20
                                                           APPLICATION NUMBER: 60/063127
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FILING DATE: 1997-10-27
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361 ATGATGATGATGATGATGAGGACAACTCTTTTTCCAACAAGAGGCCAAGAA 420	421 GCCATTTTTTCCATTGATCTGTTTCCAATGTCTCCATTGGATGTCAGTGCTATTCAC 480	481 GAGTTGTACATTGCTCAGATTTAGGTTTGACCTCAGTCCCAACCAA	541 CTCGAATGCTTGATCTTCAAACAATAAAATTAAGGAAATCAAAGAAAATGATTTAAAG 600 	601 GACTCACTTCACTTTATGGTCTGATCCTGAACAACAACAACGAAGGAGATTCACCCAA 660 	661 AAGCCTTTCTAACCACAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTAGTG 720 	721 AAATACCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGAAAATAAAGTTA 780 	781 AGAAAATACAAAAGGACACTTCAAAGGAATGAATGCTTTACACGTTTTGGAAATGAGTG 840 	841 CAAACCCTCTTGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGACGGTGTTCC 900 	901 ATAİCAGAATIGCAGAAGCAAAACIGACCICAGIICCIAAAGGCITACCACACIITAI 960 	961 TGGAGCTTCACTTAGATTATAAAATTTCAACAGTGGAACTTGAGGATTTTAAACGAT 1020 	1021 ACAAAGAACTACAAAGCTGGGCCTAGGAAACAACAAAATCACAGATATCGAAAATGGGA 1080 	1081 GTCTTGCTAACATACCACGTGTGAGAAATACATTTGGAAAACAATAAACTAAAAAAA 1140 	1141 TCCCTTCAGGATTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTC	1201 TTGCAAGAGTGGGAGTAAATGACTTCTGTCCAACAGTGCCAAAGATGAAGAAATCTTTAT 1260 	1261 ACAGTGCAATAAGTTTATTCAACAACCGGTGAAATACTGGGAAATGCAACCTGCAACAT 1320 	1321 TTCGTTGTGTTTTGAGCAGAATGAGTGTTCAGCTTGGGAACTTTGGAATGTAATAG 1380 	1381 TAATTGGTAATGTCCATTTAATATAAGATTCAAAAATCCCTACATTTGGAATACTTGAAC 1440 	1441 TCTATTAATAATGGTACTATTATATATACAAGCAAATATCTATTCTCAAGTGGTAAGTCC 1500
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Db 2341 GAAACCGAAAGCTTTTATATAAATGCTCAGAGTTTCTTTATAGCTATTTGCATTCA 2400	2401 CATATGTAAAATCAGAAAACAGGAAATTTCATTAAAAATATTGGTTTGAAAT 2454 [Algiaranicaganancaggganiiicaiinananiniiggiiighani 24	, ,	щ	Filvaroff, Ell. Gao, Wei-Qiang Gerritsen, Mar Goddard, Audre		Tumas, E Watanah Wood, Wi	APPLICANT: Zhang, Zemin Table Coll College Co	CORRENT FILING DATE: 2002-04-16 ; CURRENT FILING DATE: 2002-04-16 ; Prior Application removed - See File Wrapper or Palm ; NUMBER OF SEQ ID NOS: 550	; SEQ 1D NO 327 ; TENOTH: 2454 ; TYPE: DNA ; ORGANISM: Homo Sapien	Juriz3 304 52/ Query Match 100.0%; Score 2454; DB 9; Length 2454; Best Local Similarity 100.0%; Pred. No. 0; Addition 2454; Concornation No. 0; Addition 2454.	TOTOGGAGCAGTTTATTCCAGTATCACCGGGGGGCGCCACCACCACGACT 60	GTGTTGAAGGGFGTTTTTTTTTTTAAATGTAATACCTCCTCATCTTTTCTTTC	121 AGTGTCTGAGAACATTACATTATAGATAAGTAGTAGATGGTGGATAACTTCTACTTTA 18	181 GGAGGACTACTCTTCTGACAGTCCTAGACTGGTTCTACACTAAGACACCATGAAGG 24 181 GGAGGACTACTCTCTTCTGACAGTCCTAGACTTCTACACTAAGACACCATGAAGG 24 181 GGAGGACTACTCTCTCTCTACAGACTCTAGACTCTACTAAGACACCATGAAGG 24	241 AGTATGTGCTCTATTATTCCTGGCTTTGTGCTCTGCCAACCCTTCTTAGCCCTTCAC 30	241 MUTATION DELICATION DE LA MATERIA DEL LA MATERIA DE MAT	361 ATGATGATGATGATGATGATGATGATGATGATGATGATGA

## APPLICANT: DeForge, Laura ## APPLICANT: Desnoyers, Luc ## APPLICANT: Fluctoff, Ellen ## APPLICANT: Gao, Wei-Oiang ## APPLICANT: Godard, Audrey ## APPLICANT: Godowski, Paul J. ## APPLICANT: Godowski, Paul J. ## APPLICANT: Sherwood, Steven ## APPLICANT: Sherwood, Steven ## APPLICANT: Sherwood, Steven ## APPLICANT: Timothy A. ## APPLICANT: Timothy A. ## APPLICANT: Timothy A. ## APPLICANT: Watanabe, Colin K. ## APPLICANT: Watanabe, Colin K. ## APPLICANT: Watanabe, Colin K.	## APPLICANT: WOUND WILLIAM ## APPLICANT: ABONG WILLIAM ## TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC ## TITLE OF INVENTION: SCIDS ENCODING THE SAME ## FILE REFERENCE: P3330RIC160 ## CURRENT FILING DATE: 2002-05-06 ## PIOT APPLICATION NUMBER: US/10/140,470 ## CURRENT FILING DATE: 2002-05-06 ## PIOT APPLICATION TEMOVED: See Palm or File Wrapper ## NUMBER OF SEQ ID NOS: 550 ## SEQ ID NO 327 ## LENGTH: 2454 ## TYPE: DA ## ORGANISM: Homo Sapien US-10-140-470-327	Query Match 100.0%; Score 2454; DB 9; Length 2454; Best Local Similarity 100.0%; Pred; No. 0; Atches 2454; Onservative 0; Mismatches 0; Indels 0; Gaps QY 1 GGACTAATCTGGGGAGCAGTTATTCCAGTACACCCAGGGTGCAGCACCAGGACT 6 Interpretation 1 Interpretation 1 Interpretation 1 Db 1 GGACTAATCTGGGAGCAGTTTATTCTTTTAATCCAGTACACCAGGGTGCACCACCAGGACT 6 QGACTAATCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	Qy 121 AGTGTCTGAGAACATTATACATTATAGATAGTACATGGTGGATAACTTTTA 1 Db 121 AGTGTCTGGAACATTACATTATAGATAAGTAAGTACATGTTGGATAACTTTTA 1 Db 121 AGTGTCTGGAACATTACATTATAGATAAGTAGTACATGGTGGATAACTTTATATTA 1 Qy 181 GGAGACTACTCTCTCTCTCTGACAGTCCTAGACTGCTAAGACACATAGACACATGAGAG 2 Qy 241 AGTATGTGCTCTATTATCCTGGCTTTGTGCTCTGCCAACCCTTCTTTAGCCCTTCAC 3 Ph 181 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Qy 361 ATGATGATGATGATGATGAGGACAACTCTTTTTCCAACAAGAGACCCAAGAA 4	
QY 1501 ACTGACTTATTTATGACAAGAATTTCAACGGAATTTTGCCAAACTATTGATACATAG 150	1041 ACATTGATACAGACATITION CONTROLLAND CON	Db 1861 CATCTTAAAGTATGATATATTGAAATTACCTTATCAGAGCC 1920 Oy 1921 GTCTTTATGTTTAAAACTAATTCTTAAAATAAAGCCTTGATCATTACCAGC 1920 Oy 1921 GTCTTTATGTTTAAAACTAATTCTTAAAATAAAGCCTTCAGTAAATGTTCATTACCAAC 1980 Oy 1981 TTGATAAATGTTAAAACTAATTTCTTAAAAATAAAGCCTTCAGTAAATGTTCATTATTTTTTT 2040 Db 1981 TTGATAAATGCTACTCATAAGAGCTGGTTTGGGGCTATAGCATTTTTTTT	2101 CGCATTTTAATGATCCGCTATTATAAGCTTTTAATACCATGAAAATTGTTAGGCTATATA 11111111111111111111111111111111	2341 GAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTATGTATTTCTTATTGGCATTCAA 11111111111111111111111111111111	RESULT 10 US-10-140-470-327 US-10-140-470-327 Sequence 327, Application US/10140470 Publication No US20030022331A1 GENERAL INFORMATION: APPLICANT: Baker, Kevin P. APPLICANT: Beresini, Maureen

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ć á	ACAGTGCAATAAGTTTATTCAACACCCGGTGAAATACTGGGAAATGCAACCTGCAACAT 1	QY	2341 GAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTATGTATTCTTATTGGCATTCAA 2400
0 y 0	ACAGIGCAAIAAGITIAITCAACAACCCGGIGAAAIACIGGGAAAIGGGAACCIGCAACAI TTCGTTGTGTTTTGAGCAGAATGAGTGTTCAGCTTGGGAACTTTGGAATGTAATAG 	Å da	2401 CATATGTAAAATCAGAAAAAGGGGAAATTTTCATTAAAAATATTGGTTTGAAAT 2454
3	1381 TAATTGGTAATGTCATTTAATATAGATTCAAAAATCCCTACATTTGGAATACTTGAAC 1440 	RESUL US-10	ESULT 11 S-10-175-746-327 Sequence 327, Application US/10175746
Qy Db	1441 TCTATTAATAATGGTAGTATTATATACAAGCAAATATCTATTCTCAAGTGGTAAGTCC 1500 	Pub GEN GEN	Lication No. US20030027270A1 HERAL INFORMATION: PPLICANT: Baker, Kevin P.
çy an	1501 ACTGACTTATTTTATGACAAGAAATTTTCAACGGAATTTTGCCAAACTATTGATACATAAG 1560 	AP : AP	APPLICANT: DeForge, Laura APPLICANT: Desnoyers, Luc APPLICANT: Filvaroff, Ellen APPLICANT: Gao, Wei-Qiang
%	1561 GGGTTGAGAGAAGAAGCATCTATTGCAGTTTCCTTTTTGCGTACAAATGATCTTACATA 1620 	AP :	
oy Oy	1621 AATCTCATGCTTGACCATTCCTTCATAACAAAAAGTAAGATATTCGGTATTTAAC 1680 	A P P P P P P P P P P P P P P P P P P P	
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                                                                                                                                                                                   9
                                                                                                                                                                                                      9
                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330RLC353
CURRENT APPLICATION NUMBER: US/10/175,746
CURRENT FILING DATE: 2002-06-19
Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
SEQ ID NO 327
LENGTH: 2454
                                                                                                                                                                                   GGACTAATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACCACGGACT
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100.0%; Pred. No. 0;
ive 0; Mismatches
                                                                                                                                                   Best Local Similarity 100.0%;
Matches 2454; Conservative
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ORGANISM: Homo Sapien
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US-10-175-746-327
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qq	901	ATCAGAATTGCAGAAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTAT (
QY	196	TGGAGCTTCACTTAGATTATAATAAAATTTCAACAGTGGAACTTGAGGATTTTAAACGAT 1020
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Oy .	1441	TCTATTAATAATGGTAGTATTATATATACAAGCAAATATCTATTCTCAAGTGGTAAGTCC 1500
qa		CTATTAATAATGGTAGTATTATATATATACAAGCAAATATCTTATTCTCAAGTGGTAAGTC
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Qy	1801	GAGTGCATTACACTATTCTTATTCTTTAGTAACTTGGGTAGTACTGTAATATTTTAAT 186
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Qy	1861	ATCITAAAGTATGATTTGATATAATCTTATTGAAATTACCTTATCATGTCTTAGAGCCC 192
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APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Gotowski, Paul J.
APPLICANT: Sherwood, Steven
APPLICANT: Sherwood, Steven
APPLICANT: Sinith, Victoria
APPLICANT: Stewart, Timothy A.
APPLICANT: Tamas, Daniel
APPLICANT: Watanabbe, Colin K
APPLICANT: Wood, William
APPLICANT
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Godowski, Paul J.
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Deforge,Laura
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<pre>Qy 2401 CATATGTAAAATCAGAAAACAGGAAATTTTCATTAAAATATTGGTTTGAAAT 2454 </pre>	1 1 0	; APPLICANT: Baker.Kevin P.; APPLICANT: Beresini,Maureen ; APPLICANT: Deforge,Laura ; APPLICANT: Desnoyers,Luc	Fllvaroff, Ell: Gao, Wei-Qiang Gerritsen, Mar: Goddard, Audre			APPLICANT: AIRBY TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C154	CORRENT APPLICATION NUMBER: US/10/13/,865; COURRENT ELLING DATE: 2002-05-03; Prior Application removed - See Palm or File Wrapper; NUMBER OF SEQ ID NOS: 550	; SEQ 1D W0 32/ ; LENGTH: 2454 ; TYPE: DNA ; ORGANISM: Homo Sapien	Ş	1 GGACTAATCTGTGGGAGCAGTTATTCCAGTATCACCCAGGGTGCAGCCACCAGGA 1 GGACTAATCTGTGGAGCAGTTTATTCCAGTATCACCCCAGGGTGCAGCCACCACCAGGA 1 GGACTAATCTGTGCAGAGAGAATTATTATTCCAGTAATCACCAGGGTGCAACACCACAACAACAAAAAAAA	6 GTGTTGAAGGGTGTTTTTTTTTTTAAATGTAATGCTACCCCAGGGTGCTTTTTTTT	121 ACTGCCGGCATTTACATTATACATAGTAGTACCCCCCCCC	181 GGAGGACTACTCTTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACACCATGAAGG 24 181 GAAGGACTACTCTTCTTGACTAGACTGGTCTTCTACACTAAGACACCATGAAGG 24 181 GAAGGACTACTTCTTCTTGATTTTTTTTTTTTTTTTTTT	241 AGRAGACCTCTATTATTCCTGGCTTTGTGCTCTGCTCTACACTTTTAGCCCTTCACACCTTCACACCCTTCACACCCTTCACACCCTTCACACACACACACCCTTCA	301 ACATCGCACTGAATATGATGCTGAAGGATATGGAAGACACACAGATGATGATGATGATGATGATGATGATGATGATGATGAT	361 ATGATGATGATGATGATGATGATGATGACACTCTCTTTTCCAACAGAGGGCCAAGAA 42 161 ATGATGATGATGATGATGATGATGATGATGATGACCCACTCTCTTTTCCAACAAGAGGGCCAAGAA 42 161 ATGATGATGATGATGATGATGATGAGGACAACTCTCTTTTTCCAACAAGAGGCCAAGAA 42

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Publication No. US20030032156A1
PUBLICATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maureen
APPLICANT: DeForge, Laura
APPLICANT: DeForge, Laura
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US-10-140-474-327

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AGTGTCTGAGAACATTTACATTATAGATAAGTAGTACATGGTGGATAACTTCTACTTTTA 180
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C1E SP330R10/140,474
CURRENT APPLICATION NUMBER: US/10/140,474
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100.0%; Pred. No. 0;
tive 0; Mismatches
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                                                                                                                             Stewart, Timothy A
                   Gerritsen, Mary E
                                  Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                        Sherwood, Steven
Smith, Victoria
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Wood,William
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Best Local Similarity 100.
Matches 2454; Conservative
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Gao, Wei-Qiang
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US-10-140-474-327
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AAGCCTTTCT AAGCCTTTCT AAATACCACT IIIIIIIIIIIIIIIIIIIII	AGAAATACAAA CAAACCTCTTC CAAACCCTCTTC CAAACCCTCTTT ATATCAGAATTC ATATCAGAATTC	TGGAGCTTC TGGAGCTTC TGGAGCTTC ACAAAGAAC TIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	TCCCTTCAC	TAATTGGTA TAATTGGTA TCTATTAAT	AATCTCATG
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Qy Db	1741	AAAATTTGTGCTCTTTCATTTGCTGTTAGAAAAACAGAATTAACAAGACAGTAATGTGA 1800
Qy	1801	AGAGTGCATTACACTATTCTTTAGTAACTTGGGTAGTACTGTAATTTTTAAT 1860
QQ	1801	AGAGTGCATTACACTATTCTTATTCTTTAGTAACTTGGGTAGTACTTGTAATATTTTAAT 1860
Qy	1861	CATCTTAAAGTATGATATGATATAATCTTATTGAAATTACCTTATCATGTCTTAGAGCCC 1920
QΩ	1861	CATCTTAAAGTATGATTTGATATAATCTTATTGAAATTACCTTATCATGTCTTAGAGCCC 1920
Οy	1921	GICTITATGITTAAAACTAATTICTTAAAATAAAGCCITCAGTAAATGITCATTACCAAC 1980
qq	1921	GICTITIATGITITAAAACTAATTTCTTAAAATAAAGCCTTCAGTAAATGITCATTACCAAC 1980
Qy	1981	TTGATAAATGCTACTCATAAGAGCTGGTTTGGGGCTATAGCATATGCTTTTTTTT
QQ	1981	TIGHTHILLING THE
Qy	2041	ATTATTACCTGATTTAAAAATCTCTGTAAAAAGGTGTAGTGTTTCATAAAATCTGTAACT 2100
Dp	2041	ATTATTACCTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCATAAAAATCTGTAACT 2100
0y .	2101	CGCATITTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAATTGTTAGCTATATA 2160
Db	2101	CGCATTTTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAATTGTTAGGCTATATA 2160
QY	2161	ACATIGCCACTICAACTCTAAGGAATATTTTGAGATATCCCTTTGGAAGACCTTGCTTG
QQ	2161	ACATTGCCACTTCAACTCTAAGGAATATTTTGAGATATCCCTTTGGAAGACCTTGCTTG
Οy	2221	GAAGAGCCTGGACACTAACAATTCTACACCAAATTGTCTCTTCAAATACGTATGGACTGG 2280
DÞ	2221	GAAGAGCCTGGACACTAACAATTCTACACCAAATTGTCTTCAAATACGTATGGACTGG 2280
Qy	2281	-ATAACTCTGAGAAACACATCTAGTATAACTGAATAAGCAGAGCATCAAATTAAACAGACA 2340
Dp	2281	ATAACTCTGAGAAACACATCTAGTATAACTGAATAAGCAGAGCATCAAATTAAACAGACA 2340
Qy	2341	GAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTATGTATTTCTTATTGGCATTCAA 2400
QQ	2341	GAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTATGTATTTCTTATTGCATTCAA 2400
QY	2401	
qq	2401	CATATGTAAAATCAGAAAAAAAAAAAAAAAAAAAAAAAA

Search completed: May 31, 2003, 13:43:57 Job time: 347 secs

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Huhan; PRO protein; tumour necrosis factor family; TNF; cytokine; secreted protein; transmembrane protein; inflammation disorder; ss.
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Human secretory and transmembrane; PRO; mammalian; cancer; lung; beast, prostate, cervical; tumour necrosis factor-alpha; TNR-alpha; cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle; adipocyte; A-peptide; factor VIIA; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379
                                                                      PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle
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                                                                                                                                                                                                                                                                                                                  The present invention describes nucleic acids encoding PRO secreted and transmembrane proteins used therapeutically. The PRO proteins have cytostatic, anti-inflammatory, anti-proliferative and immunosuppressive activity. The proteins and polynucleotides can be used in therapy, identification of homologues, raising antibodies and design of probes and primers. They can be used in a range of diseases related to proteins that they have homology with, e.g. a PRO protein having homology to
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                                                                                                                                                                                                                                                                            Nucleic acids encoding PRO secreted and transmembrane proteins
                                                                                                                                                                                                                                                                                                                                                                                         complement proteins may be used in inflammatory responses
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Baker KP, Beresini M, Deforge L, Desnoyers L, Filvaroff E, G.
Gerritsen ME, Goddard A, Godowski PJ, Gurney AL, Sherwood S;
Smith V, Stewart TA, Tumas D, Watanabe CK, Wood WI, Zhang Z;
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02-JUN-2000; 2000WO-US15264
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       07-JUN-2001
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3 Gao Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical

Claim 3; Fig 327; 813pp; English.

AAS21244-AAS21518 encode for novel human secretory and transmembrane PRO polypeptides. The PRO polypeptides are useful to detect other PRO polypeptides, to link bloactive molecules to cells expressing PRO polypeptides, and to detect the presence of mammalian lung, colon, breast, prostate, rectal, cervical or liver tumours by comparing PRO polypeptide expression in a cell sample to that in a control sample. Some of the 275 sequences are also useful to stimulate the release of tumour necrosis factor-alpha (TMR-alpha) from human blood, the proliferation or differentiation of condocytes, the proliferation or cartilage, the proliferation of inner ear utricular supporting cells or of T-lymphocytes, the release of a cytokine from peripheral blood monocytes, the proliferation of inner ear utricular supporting cells or the PRO polypeptides may modulate glucose or free fatty acid uptake by skeletal muscle cells or by adipocytes; or inhibit bloiding of A-peptide to factor VIIA. The PRO polypeptides can be used in assays to identify respectively the proliferations. The polymucleotides encoding the propose, and can be used in assays to identify the propose. transgenic or knock out animals and can be used in gene therapy

Sequence 2454 BP; 835 A; 432 C; 417 G; 770 T; 0 other;

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Qy 81	rSerArg	ValValHisCysS	erAspLeuGlyLeuThr	SerValProThrAsnIlePro	100
Db 474	TATTCACGA	STIGTACATIGCT	TTAGGTTTGACC	TCAGTCCCAACCAATTCC	533
Qy . 101	PheAspThr	ArgMetL	SlnAsnAsnLysIle	LysGluIleLysGluAsnAsp	120
Ob 534	TTTGATACT	CGAATGCTTGAT	CAAAACAATAAAATT	AAGGAAATCAAAGAAAATGA	593
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Db 594	TTTAAAGGA	CTCACTT	GTCTGATCC	AGCTAACGAAG	653
Qy 141	HisProLys	AlaPheLeuThr	ysLysLeuArgArg	LeuTyrLeuSerHisAsnGln	160
Db 654	CACCCAAA	GCCTTTCTAACC	AAGTTGCGAAGG	crerarcrereceacaar	713
161	LeuSerGlu	IeProLeuAsnL	euProLysSerLeuAla(GluLeuArgIleHisGluAsn	
714	CTAAGTGAA	ATACCACTTAATC	ccaaarcarragca	CTCAGAATTCATGAAAA	773
181	Lysvally	rsLysIleGlnLysAsp7	pThrPheLysGlyMetAsn	AsnalaLeuHisValLeuGlu	Ö
774	AAAGTTA	CAAAAG	CACATTCAAAGGAATG	SCTTTACACGTTTTG	m
201	MetSerAla	AlaAsnProLeuAspAsn?	nAsnGlyIleGluPro	roGlyAlaPheGluGlyValThr	ā
0b 834	ATGAGT	CTCTTGAT	AATGGGATAGAGC	SCATTTGAAGGGGTG	893
221	. ValPheHis	IleArgIleAlaGluAl	aLysLeuThrSe	rValProLysGlyLeuProPro	
0b 894	GTGTTCCA	ATCAGAATTG	AAAACTGACCTC	rccraaagcctraccacc	953
Qy 241	ThrLeuLeu	GluLeuHisLeuA	FyrAsnLysIleSe	rThrValGluLeuGluAspPhe	260
Db 954	ACTITALL	GAGCTTCACTTAG	ATAATAAATTTC	CAGTGGAACTTGAGGATT	1013
Qy 261	LysArgTyr	rLysGluLeuGlnArgI	ceuGlyLeuGlyAsn	AsnLysIleThrAspIleGlu	280
Db :1014	AAACGATA	SAACTACA	TGGGCCTAGGAAA	AAATCACAGATATCGA	1073
Qy 281	-	LeuAlaAsnIlePro	ArgValArgGluIl	eHisLeuGluAsnAsnLysLeu	ō
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Qy 301	Lystysile	ProSerGlyLe	uProGluLeuLysTyrLeuG]	GlnIleIlePheLeuHisSer	320
1134	AAAT	CCTTCAGGATT	AGAGTTGAAATACCTC	AGATAATCTTCCTTCATT	1193

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PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, mycoardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a coding sequence of the invention.
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                                                                                                                                                                                                                                                                                                                                                    One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal
                                                                                                                                                                                                                                                                  Paoni NF;
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L, Hillan KJ, Marsters SA, Pan J,
CK, Williams PM, Wood WI, Ye W;
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Stephan JF, Watanabe CK,
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MARSTERS S A.
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GERRITSEN M E.
 GENENTECH INC.
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STEPHAN J F.
WATANABE C K.
WILLIAMS P M.
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               BAKER K P.
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atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
antiarteriosclerotic; gene; ss.
                                                                                                                               361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379
AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysMetLysLys
                                                        SerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro
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Homo sapiens.

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                                                                    LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200
                    PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140
                                                           HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160
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TITGAIACTCGAAIGCITGAICTTCAAAACAAIAAAATTAAGGAAAICAAAGAAAAIGAT 593
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wound healing; chromosome mapping; gene mapping; gene; ss

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ABBBSSOO3. The PROPAGE LIE TO PINCEARS STATE ABBBSSOO3 and polynocleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polynocleotides, proteins, agonists and antagonists are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g. cardiac hypertrophy, trauma, cancer, age-related macular heumatoid arthritis, angina, hypertension, arterial restenosis, rheumatoid arthritis, angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polynocleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABLB8259 to ABLB8267 represent primers and probes used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal
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Ye W;
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Sequence 2454 BP; 835 A; 432 C; 417 G; 770 T; 0 other;	gnment Scores:	7.16e-199 Length: 1992.00 Matches:	ocal Similarity: 100.00% Conservative: 0	100.00% Indels: 24 Gaps:	6 (1-2454)	1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlalwsProPhePheSer 20		ProSerHislleAlaLeuLysAsnMetMetLeuLysAspMetGluAspThrAspAspAsp 40	294 CCTTCACACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACACAGATGATGAT 353	41 AspAspAspAspAspAspAspAspAspOluAspAsnSerLeupheProThrArgGlu 60 	. 61 ProArgSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80	414 CCAGGAGCCATTTTTCCATTTGATCTGTTTCCAATGTGTCCCATTTGGATGTCAGGC 473	81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100 	Dhokenthanadat to the total and the terror and the	101 102 102 103	121 PheLysGlyLeuThrSerLeuTyrGlyLeulleLeuAsnAsnAsnLysLeuThrLyslle 140 	٦		161 LeuSerGluileProLeuAsnLeuProLysSerLeuAlaGluLeuArgileHisGluAsn 180 	20	774 AAAGTTAAGAAATACAAAAGGACACATTCAAAGGAATGAAT	201 MetSerAlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThr 220 	21 ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro 24		241 ThrLeuLeuGluLeuRisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe 260	954 ACTTATTGGAGCTTCACTTAGATTATAATAAAATTTCAACAGTGGAACTTGAGGATTT 1013	261 LysArgTyrLysGluLeuGlnArgLeuGlyAenGlyAsnAsnLysIleThrAspIleGlu 280	NonCluster Charles Control C	201 ASHOLYSELLEUAAASHILEFTOALGYALAYGULULEHISLEUGLUASNASNLYSLEU 300
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les which are designated as PRO polypeptides are described
nne-bound proteins have various industrial applications,
as pharmaceutical and diagnostic agents. The membrane-bound
an also be employed for screening of potential peptide or
scule inhibitors of the relevant receptor/ligand interaction.
Intibodies are useful for the affinity purification of PRO
nbinant cell culture or natural sources.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rane bound protein; secreted protein; PRO357; PRO327; RO715; PRO241; PRO323; PRO299; PRO233; PRO344; PRO347; RO353; PRO361; PRO365; transmembrane polypeptide; screening; detection; inhibition; probe; primer; human;
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IE, Goddard A, Godowski PJ, Grimaldi CJ, Gurney AL;
Kljavin IJ, Napier MA, Roy MA, Tumas D, Wood WI;
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Oy 81	81 TyrSerArgValValHiSCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100	KW ALGINETIES S. CALFORD S. ALGORDS. MANAGEMENT KW Amyotrophic lateral sclerosis; Shy-Drager KW chemokinetic; thrombolytic; drug screenin KW leukaemia; ss.
	PheaspThrargMetLeua	XX OS Homo sapiens.
Db 534		XX PN WO200153312-A1.
Qy 121	PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140	XX PD 26-JUL-2001. XX PF 26-DFC-2000: 2000MO-US34263.
	TITAMAGGACICACITTATGGICIGAICCIGAACAACAAGGAAGGAAGGAA	
Qy 141 Db 654	41 HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160 	21-JAN-2000; 25-APR-2000; 09-JUL-2000;
161	1 LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsn 180	03-AUG-2000 14-SEP-2000 19-OCT-2000
	LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu	29-NOV-2000; (HYSE-) HYSE
		Tang YT, Liu C
UŞ 201 Db 834	Metsetalaashtroleuaspashasholyileolurfoolyaartheolusiyaaliiii 	zhao QA, zhou P, Goodrich R, Drman
	ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro	DR WPI; 2001-442253/47. DR P-PSDB; AAM40351.
Db 89	94 GIGTICCATATCAGAATGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACA 953	XX PT Novel nucleic acids and polypeptides, u. PT such as central nervous system injuries
	ThrLeuLeuGluLeuHisLeuAspPyrAsnLysIleSerThrValGluLeuGluAspPhe 260	Claim 1; SEQ ID NO 1710;
Dp qq	ACTTTATTGGAGCTTCACTTAGATTATAATAAATTTCAACAGTGGAACTTGAGGATTTT	
Qy 261 Db 1014	261 LysargtyrLysGluLeuGlnargLeuGlyLeuGlyAsnasnLysIleThrAspIleGlu 280 	CC the encoded polypeptides (AAM38642-AAM422 CC immunosuppressant and cytostatic activity CC in gene therapy, A composition containing
Oy 26	281 AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300	
Db 107	4 AATGGGAGTCTTGCTAACATACCACGTGTGAGAAATACATTTGGAAAACATAAACTA 1133	CC Alzheimer's, Parkinson's disease, Hunting CC Alzheimer's, Parkinson's disease, Hunting CC Tateral sclerosis, and Shv-Drader Syndron
Oy	301 LysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSer 320	

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tc acids (AAI57798-AA161369) and AM42213) with nootropic, Ivity. The polynucleotides are useful lining a polypeptide or polynucleotide idseases of the peripheral nervous njuries, peripheral neuropathy and arvous system diseases, such as ntington's disease, amyotrophic aforme. Other uses include the immune system suppression,
                                                                                                             AAATACCTCCAGATAATCTTCCTTCATTCT 1193
                                                                                                                                                                              tostatic; gene therapy; cancer;
central nervous system; CNS;
ington's disease; haemostatic;
er Syndrome; chemotactic;
ing; arthritis; inflammation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seful for treating disorders
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ue AJ, Yang Y, ?
c RT;
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Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders.

Note: The sequence data for this patent did not form part of the printed
                                        printed
                                                                                                                                                                                                                                                                                                                                                                                           ----Asp
                                                                                                                                                                                                                                              CCTTCACACATCGCACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGATGAT
                                                                                                                                                                                                                                                                                                       ArgGluProArgSerHis-PhePheProPheAspLeuPheProMetCysProPheGlyCy
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                                                                                                                                                                                                                                                                                                                                             sGlnCysTyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAs
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                                                                                                                                                                                                                           ProSerHisIleAlaLeuLySAsnMetMetLeuLySAspMetGluAspThr
                                       not form part
                                                                   T; 0 other;
                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                    G; 442
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                                                                    512 A; 300 C; 294
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1968.00
99.21%
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Best Local Similarity:
                                                                    Sequence 1548
                                                specification
                                                                                     Alignment Scores:
Pred. No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as
                                                                           318
                                                                         plleGluAsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAs
                                                                                                                                                                               tLysLysSerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful in ,
of mutations
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                          novel human diagnostic protein #22560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID No 22560; 103pp; English.
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2000US-0649167
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23-AUG-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
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                                                                                                                               T; 0 other;
                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                              ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                               BP; 499 A; 279 C; 279 G; 435
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1828.00
96.41%
95.90%
91.77%
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Best Local Similarity:
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Pred. No.:
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GlyLeuProProThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGlu 256
                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; cytostatic; antiinflammatory; immunoregulatory; tissue integrity; wound healing; immune response; waccine; cancer; asthma; allergy; cell trafficking; BGN: bone/cartilage proteoglycan I protein; biglycan; PG-S1; secreted protein; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated polypeptide useful to isolate corresponding interacting proteins or other compounds, to quantitatively determine levels of interacting proteins or other compounds, and as therapeutic target -
                                                                          oLysMetLysLysSerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTr
                                                                                                                                                                                                   pGluMetGlnProAlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAs
                                      LeuGluAspPheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIle
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/product= "Mouse bone/cartilage proteoglycan
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P-PSDB; AAE05347.
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                                                                 The patent discloses novel polynucleotides and their corresponding proteins which play a major role in induction of growth, cell migration and proliferation, cell-cell interaction and the differentiation of tissue-specific cells. These proteins are important in the maintenance of tissue integrity and thus are important in wound healing. They are useful in various assays to determine the biological activity, to raise antibodies, to isolate corresponding interacting proteins or other compounds, to quantitatively determine levels of interacting proteins or other compounds, and as therapeutic target in a whole range of disease states. Compositions comprising the novel proteins of the invention are useful in genome and physical mapping, in positional cloning of genes, to tag or identify an organism of its reproductive material (as non-disruptive tags for marking organisms), and for the diagnosis and treatment of mammalian diseases which is the consequence of inappropriate expression of kinase genes. They are useful for promoting immune response
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             treatment, as immunoregulatory and anti-inflammatory molecule, as diagnostic for specific types of cancer and for development of an anti-cancer treatment, and as a target for antagonists in the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of diseases such as asthma and allergy. They are also useful to inhibit or enhance the activity of the soluble molecule that binds proteins of the invention, for tissue and neural regeneration, to promote or block
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell trafficking, and as anti-inflammatory and/or vaccine adjuvant.
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                     Claim 1; Page 53,55; 101pp; English.
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developmental defect; inflammatory disease; dermatological; vulnerary;
immunomodulator; anti-inflammatory; cytostatic; neuroprotective; gene;
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11-JAN-2000;
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                                                                                                               The present invention provides the protein and coding sequences of CDNAs isolated from human, murine and rat skin cell libraries. The sequences can be used in the development of therapeutic agents useful in the treatment of skin diseases, including skin wounds, cancer, growth defects, developmental defects and inflammatory diseases. The proteins have important roles in the induction of hair growth, cell proliferation and cell-cell interaction, in maintaining tissue integrity, in wound healing and in modulating immune responses. The present sequence is a cDNA of the invention.
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                                                    ucleotides and polypeptides encoded by the polynucleotides from skin cells, useful for treating skin wounds, cancers, in developmental defects, inflammatory diseases, or for
        Kumble
        JG,
         Murison
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         Sleeman
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1799.00
94.718
90.218
90.318
                                                                          growth and developmental def
modulating immune responses
          'n
         Strachan
                           WPI; 2002-122020/16.
P-PSDB; ABB72356.
                                                                                                      Claim 1; Page 359;
                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
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        Watson JD,
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                                                        AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu
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AAAGTTÄAGAAGATACAAAAGGACACGTTCAAGGGAATGAATGCTTTACATGTTTTGGAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  378
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, Otsuki
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A, Naga
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T, Wakamat
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                                                                    The present invention describes primer sets for synthesising 5602
[full-length cDNAs defined in the specification. Where a primer set
comprises: (a) an oligo-dT primer and an oligonuclectide complementary
to the complementary strand of a polynuclectide which comprises one of
the 5602 nucleotide sequences defined in the specification, where the
cligonuclectide comprises at least 15 nucleotides; or (b) a combination
of an oligonuclectide comprising a sequence complementary to the
complementary strand of a polynucleotide which comprises a 5'-end
sequence and an oligonuclectide comprising a sequence complementary to a
polynucleotide which comprises a 3'-end sequence complementary to a
polynucleotide which comprises a 1'-end sequence, where the
oligonucleotide opicies and reast 15 nucleotides and the combination of
the 5'-end sequence, 3'-end sequence; where the
oligonucleotide opicies at least 15 nucleotides and the combination of
the specification. The primer sets can be used in antisense therapy and
in gene therapy. The primers are useful for synthesising polynucleotides,
particularly full-length cDNAs. The primers are also useful for the
connection and/or diagnosis of the abnormality of the full-length
cDNAs easily without any specialised methods. AAH13628 and
AAH13633 to AAH13642 represent human cDNA sequences; AAB92893 represent human amino acid sequences; and AAH13632
represent oligonucleotides, all of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and/or diagnosis of the abnormality of the proteins encoded by the full-length {\tt cDNAS} -
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2089 BP; 712 A; 356 C; 352 G; 669 T; 0 other;
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78.39%
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256 uLeuGluAspPheLysArgTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIl
                                                                                                                                                                                                                                  276 eThrAspIleGluAsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGl
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                                                                    HisValLeuGluMetSerAlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPhe
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324 AlaArgValGlyValAsnAspPheCysProThrValProLysMetLysLysSerLeuTyr 343

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human neuroblastoma. The nucleic acids are applicable as a probe or primer in diagnosing the prognosis of human neuroblastoma, malignancy and susceptibility indicators or tumour markers for anti-cancer agents. The gene information for diagnosing prognosis is related to factors similar to that for N-myc and TrkA genes.
                                                           Nucleic acids originating in gene expressed in human neuroblastoma, useful as probe or primer in diagnosing prognosis of human neuroblastoma, malignancy and susceptibility indicator or tumour marker
                                                                                                                                                                                                           expressed in
                                                                                                                                                                                                           to novel genes (AAI93926-AAI97963)
                                                                                                                                                                 Claim 1; Page 377; 2979pp; Japanese.
                                                                                                                          for anti-cancer agents
                                                                                                                                                                                                           relates
                 WPI; 2001-565584/63
                                                                                                                                                                                                           The invention
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Sequence 896 BP; 340 A; 169 C; 162 G; 216 T; 9 other;

Alignment Scorr Pred. No.: Score: Percent Simila Best Local Sim Query Match: DB:	Scores : similar il Similar il Similar ich:	res: arity: milarity:	4.15e-126 1293.00 95.32% 94.60% 64.91%	Length: Matches: Conservative: Mismatches: Indels: Gaps:	896 263 2 1 0	
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oy.	105	-	oLeuGlnAsnAsnLys	sileLysGluileLysG	ਜ ਹ -	24
qq	21		CTTCAAAACAATAA	AATTAAGGAAATCAAA(:::	
ογ	125		1TyrGlyLeuIleLe	JASDASDASDLYSLeu?	ThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIleHisProLysAla 14	44
qa	81		TATGGTCTGATCCT	SAACAACAACAAGCTAA		140
δy	145		ThrLysLysLeuArc	JArgLeuTyrLeuSer	PheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGlnLeuSerGluIle 16	64
•	141		CACAAAGAAGTTGCG	AAGGCTGTATCTGTCC		200
Oy	165		1 LeuProLysSerLe	uAlaGluLeuArgIle	ProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsnLysValLysLy8·18	84
qq	201		CTTCCCAAATCATT	AGCAGAACTCAGAATT		260
	185		SASpThrPheLysGly	yMetAsnAlaLeuHis\		204
.ga	261		GACACATTCAAAGG	AATGAATGCTTTACACC	ATACAAAAGGACACATTCAAAGGAATGAATGCTTTACACGTTTTGGAAATGAGTGCAAAC 32	320
0y	205		AsnAsnGlyIleGl	uProGlyAlaPheGluC	ProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThrValPheHisIle 22	224
qq	321		TAATAATGGGATAGA	SCCAGGGGCATTTGAAC		380
ογ	225		GluAlaLysLeuTh	rSerValProLysGlyl		244
.qo	381		AGAAGCAAAACTGACC	CTCAGTTCCTAAAGGCT	AGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTTATTGGAG 44	440
λ 0 .	245		ASpTyrAsnLysIle	eSerThrValGluLeuC	LeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPheLysArgTyrLys 26	264
qq	441		AGATTATAATAAAAT	TTCAACAGTGGAACTTC		200
γ	265	-	ArgLeuGlyLeuGly	yAsnAsnLysIleThri	GluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIleGluAsnGlySerLeu 28	84
qa	501		AGGCTGGGCCTAAG	AAACAACAAAATCACA	GAACTACAAAGGCTGGGCCTAAGAACAACAAAATCACAGATATCGAAAATGGGAGTCCT 56	260
ΟŊ	285		ProArgValArg-G	lulleHisLeuGluAsı	AlaasnIleProargValarg-GluIleHisLeuGluAsnAsnLysLeuLysLeuLysIlePr 30	304
qq	561		ACCACGTGTGAGAAG	AAATACATTTGGGAAA		620
Qy	304	-	euPro-GluLeuLys	oSerGlyLeuPro-GluLeuLysTyrLeuGln-IleIlei	oSerGlyLeuPro-GluLeuLysTyrLeuGln-IleIlePheLeuHisSerAsnSerIle 323	23
qa	621		raccaagagttgaaa;	TACCTCCAAGATAATC	CTCCTTCANTCCAATTCAATT	089

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344 SeralalleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnProAlaThrPhe 363
                                                                                 Human; primer; detection; diagnosis; antisense therapy; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence and an oligonucleotide comprising a sequence complementary to a polynucleotide which comprises a 3 -end sequence, where the oligonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence/3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length CDNAS. The primers are also useful for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection and/or diagnosis of the abnormality of the proteins encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the full-length cDMAS. The primers allow obtaining of the full-length cDMAs easily without any specialised methods. AAH03166 to AAH13628 and AAH13633 to AAH18742 represent human cDNA sequences; AAB92446 to AAH93639 represent human amino acid sequences; and AAH13629 to AAH13632 represent oligonucleotides, all of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligor-dr primer and an oligonucleotide compliementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamamoto J;
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Otsuki T;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isogai T, Nishikawa T, Hayashi K, S
, Sugiyama T, Wakamatsu A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                Human cDNA clone (5'-primer) SEQ ID NO:16124.
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P-PSDB; AAR87951.
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Query Match:
      Rat biglycan cDNA
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                              learning; ss.
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                                                                                 GluGlyvalThrvalPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLys
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235
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of the present invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A cDNA sequence (AAT08768) obtd. from rat smooth muscle codes for significant (AAR87951), a chondroitin sulphate proteoglycan with neurotrophic activity for brain neurons. The cDNA may be inserted into a vector and used for prodm. of recombinant biglycan in
Biglycan; proteoglycan; chondroitin sulphate; neuron protection; neurotrophic; central nervous system; CNS; memory loss; dementia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Proteoglycan cpds., partic. chondroitin sulphate proteoglycan(s) for maintain structural and function of the CNS and attenuating memory deficit(s) in the elderly and patients with dementia
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123..1232
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Homo. sapiens.

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TCACCTGATACCACACTGCTAGACCTGCAGAACAATGACATCTCTGAACTCCGCAAGGAT
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the patent discloses a method for diagnosing, prognosing or monitoring a prostate disorder which involves the analysis of 26 gene transcripts referred as markers) that exhibit aberrant expression levels in prostate

Diagnosing and monitoring prostate disorders, by analysis of 26 transcripts that exhibit aberrant expression levels in prostate disorder tissues, and provides a means of early diagnosis -

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Paskins

Ellison G,

Bull JH,

WPI; 2001-343837/36

(ASTR) ASTRAZENECA

99GB-0026805 2000WO-GB04267

08-NOV-2000; 13-NOV-1999;

25-MAY-2001

Claim 1; Page 66-67; 69pp; English.

The

disorder tissues and provides a means of early diagnosis. This method is useful for diagnosing, prognosing or monitoring a prostate disorder. It also provides a means of distinguishing prostate cancer from benign prostatic hyperplasia (BPH) and for identifying potential anti-prostate disorder therapeutic compounds.

The present sequence is a human DNA encoding bone small proteoglycan I (biglycan) protein (referred as marker 23). The biglycan protein is identified as a protein derived from human bone-derived cells.

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TCAGGCGTCCTGGACCCGGGAC-----TCTGTCTCACACCCACCTACAGC--- 300
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Query Match:
                                                                                                                                                                                                                                                                                     Sequence 1685
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BPH;

Human, cytostatic, diagnosis, prostate disorder, prostate cancer, benign prostatic hyperplasia; bone small proteoglycan I protein; biglycan protein; ds. DNA encoding bone small proteoglycan I protein (marker

BP.

DNA; 1685

(first entry)

10-AUG-2001

AAD07372;

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Bowe

Creely H,

Rafii M,

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Stabilizing dystrophin-associated protein complexes and activating postsynaptic membrane of a cell for treating or preventing muscular, neuromuscular and neurological disorders, involves contacting cell with
                                   99US-0166253
                 17-NOV-2000; 2000WO-US31661
                                                                      McKechnie B,
                                                   UYBR-) UNIV BROWN RES
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                        142 ProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGlnLeu 161
                                                          SerGlulleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsnLys 181
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neurological; smooth muscle;
571 GEGGAGATCCCGCCCAACCTACCCAGCTCCGTGGAGCTCCGCATCCACGACAACGC
                                                                                                                                                                                                                                                                                                                                                                                   342 LeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnProAla
                                   ValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGluMet
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                                                                                                                                                                  222 PheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProProThr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           biglycan; muscular dystrophy; neuromuscular;
nootropic; neuroleptic; antiviral; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein complex; DAPC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human biglycan encoding nucleotide sequence.
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characterized by abnormal neuronous culture distriction or synapse, such as neuromoscular or neurological diseases in a subject. Neurological diseases in a subject. Neurological disorders, include polymositis and Alzheimer's disease. Biglycan is also useful for preventing and treating smooth muscle disorders, such as cardiac myopathies and for treating and inhibiting infections of cells by microorganisms e.g. viruses. Agents that modulate the activity of DAG-125, identified by the methods are useful in the prophylactic and unstable DAPC or an inappropriate formation of a postsynaptic differentiation. Biglycans are also useful as a supplement to brain or muscle cell or tissue culture and, tissues can be incubated in vitro
                                                            The invention relates to stabilizing dystrophin-associated protein complexes (DAPCs) on the surface of a cell or activating a postsynaptic membrane of a cell that comprises contacting the cell with an effective amount of biglycan. A composition comprising biglycan or its portion las useful for treating or preventing a condition associated with abnormal DAPC in cells, characterized by breakdown of muscle cell membrane, which includes muscular dystrophies, such as Duchenne's, Becker's, Congenital, Limb-girdle muscular dystrophy and mytonic dystrophy and a condition
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Disclosure; Page 101-108; 112pp; English
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331 CTGCGGGTGCTTCAGTGCTCCGACCTGGGTCTGAGGTCTGTGCCCAAAGAGATCTCCCCT 390	102 AspThrargMetLeuAspLeuGlnAsnAsnLysIleLysGluIleLysGluAsnAspPhe 121 	122 LysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIleHis 141 	142 ProLysalaPheLeuThrThrLysLysLeuArgargLeuTyrLeuSerHisasnGlnLeu 161	162 SerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsnLys 181	182 ValLysLysIleĠlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGluMet 201 :::::: ::	202 SeralaasnProLeuAspAsnasnGlyIleGluProGlyAlaPheGluGlyValThrVal 221	222 PheHisIleArgIleAlaGluAlaLySLeuThrSerValProLysGlyLeuProProThr 241 :::::	242 LeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPheLys 261	262 ArgTÿrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIleGluAsn 281	282 GlyserLeualaasnIleProargValargGluIleHisLeuGluAsnasnLysLeuLys 301 	302 LysileProSerGlyLeuProGluLeuLySTyrLeuGlnIleIlePheLeuHisSerAsn 321 ::::::	322 SerilealaargValGlyValasnaspPheCysProThrValProLysMetLysLysSer 341 ::: :::	342 LeuTyrSeralaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnProAla 361 	362 ThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPhe 377
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Search completed: May 31, 2003, 15:45:08 Job time : 318 secs

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CURRENT FILING DATE: 2001.09-26
PRIOR APPLICATION NUMBER: 09/866,028
PRIOR FILING DATE: 2001-05-25
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Grimaldi,Christopher
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Gerritsen, Mary
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APPLICANT: Botstein, David
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Roy, Margaret
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                                      Command line parameters:
-MODEL-frame+_pan.model._DEV=xlh
-Q-/cgn2_1/USPTO_spool/US0994488/runat_27052003_150250_7746/app_query.fasta_1.519
-Q-/cgn2_1/USPTO_spool/US0994488/runat_27052003_150250_7746/app_query.fasta_1.519
-Q-/cgn2_1/USPTO_spool/US0994488/runat_27052003_1502005
-USPERIAN_COPELLO -UNITS_bits -START=1 -END=-1 -MATRIX-blosum62
-TRANS-human40.cdl -LIST=45 -DOCALLGN-200 -TR_SCORE=pot -TRE_MAX=100
-WAXIEN=2000000000 -USER-US09944884_@CGN_11_57_@runat_27052003_150250_7746
-NCPUG- ILCPUS-3 -NO_MAAP -LARGEQUERY -NG_SCORES-0 -NAIT -DSPBLOCK=100
-LONGLOG -DEY_THEOUT=120 -WARN_TIMEOUT=30 -THERADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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1: /cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO6_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
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              GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.

    nucleic search, using frame_plus_p2n model

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US-09-944-403-1
US-09-944-896-1
US-09-944-944-1
                                                                                                                                                                                                                                                                   845702 seqs, 674182571 residues
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Maximum Match 100%
Listing first 45 summaries
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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PRIOR FILING DATE: February 28, 2001 NUMBER OF SEQ ID NOS: 120 SEQ ID NO 1

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TYPE: DNA ORGANISM:

US-09-944-413-1

LENGTH: 2454

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FILING DATE: No. US20020156004Alember
APPLICATION NUMBER: PCT/US99/28301
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ING DATE: No. US20020156004Alember
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APPLICATION NUMBER: PCT/US98/25108
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ING DATE: September 15, 1999
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NUMBER: PCT/US00/20710
July 28, 2000
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APPLICATION NUMBER: PCT/US00/04414
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PRIOR FILING DATE: March 30, 2000
PRIOR APPLICATION NUMBER: PCT/US00/14042
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ING DATE: June 22, 1999
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FILING DATE: March 2, 2000
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FILING DATE: December 16, 1998
APPLICATION NUMBER: 09/218,517
FILING DATE: December 22, 1998
APPLICATION NUMBER: 09/254,311
60/069,334
er 11, 1997
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APPLICATION NUMBER: 60/074,086
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LICATION NUMBER: 60/074,092
LIG DATE: February 9, 1998
LICATION NUMBER: 60/075,945
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LICATION NUMBER: 60/113,296
LIG DATE: December 22, 1998
LICATION NUMBER: 60/146,222
                                                           FILING DATE: December 11, 1997
APPLICATION NUMBER: 60/069,278
                                                                                                                                         FILING DATE: December 12, 1997 APPLICATION NUMBER: 60/069,696
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                                                                                                                                                                                                                                                                                     60/069,870
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LICATION NUMBER: 60/112,850
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                                                                                                                      APPLICATION NUMBER: 60/069,425
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APPLICATION NUMBER: 60/069,694
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                                          APPLICATION NUMBER: 60/069335
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                                                                                 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer
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                       Conservative:
Mismatches:
Indels:
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281 AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFRENCE: P2548PL1.
URRENT APPLICATION NUMBER: U5/09/944,403
URRENT FILING DATE: 2001-09-26
PRIOR PPLICATION NUMBER: 09/866,028
PRIOR PPLICATION NUMBER: 00/866,028
PRIOR APPLICATION NUMBER: 00/866,028
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PRIOR FILLING DATE: December 11, 1997
PRIOR APPLICATION NUMBER: 60/069,425
PRIOR PLILING DATE: December 12, 1997
PRIOR APPLICATION NUMBER: 60/069,696
PRIOR FILLING DATE: December 1
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PRIOR APPLICATION NUMBER: 60/069 334
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PRIOR APPLICATION NUMBER: 60/069, 278
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PRIOR FILING DATE: December 16, 1997
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APPLICATION NUMBER: 60/070,440
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PRIOR FILING DATE: December 17, 199
PRIOR APPLICATION NUMBER: 60/069,87
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Patent No. US20020165143A1
GENERAL INFORMATION:
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Filvaroff, Ellen
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APPLICANT: Botstein, David
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Hillan, Kenneth
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Fumas, Daniel
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APPLICATION NUMBER: PCT/US99/28313
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PRIOR PLILING DATE: February 11, 2000
PRIOR PLILING DATE: February 22, 2000
PRIOR PELING DATE: February 22, 2000
PRIOR PELING DATE: March 2, 2000
PRIOR PELING DATE: March 30, 2000
PRIOR PLING DATE: March 30, 2000
PRIOR PLING DATE: March 30, 2000
PRIOR FILING DATE: MAY 22, 2000
PRIOR FILING DATE: MAY 22, 2000
PRIOR FILING DATE: July 28, 2000
PRIOR FILING DATE: July 28, 2000
PRIOR PLILING DATE: December 1, 2000
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PRIOR APPLICATION NUMBER: PCT/USO0/3678
PRIOR PRILING DATE: December 1, 2000
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R APPLICATION NUMBER: 09/254,311
R FILING DATE: March 3, 1999
R FILING DATE: June 22, 1999
R FILING DATE: June 22, 1999
R RELING DATE: Speedmen 15, 1999
R APPLICATION NUMBER: PCT/US99/28409
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                                              FILLING DATE: February 9, 1998
APPLICATION NUMBER: 60/075,945
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          APPLICATION NUMBER: 60/074,092
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APPLICATION NUMBER: 60/112,850
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ORGANISM: Homo Sapien
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CURRENT APPLICATION NUMBER: US/09/944,896
CURRENT FILING DATE: 2001-08-31
PRIOR APPLICATION NUMBER: 09/866,028
PRIOR FILING DATE: 2001-05-25
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FILING DATE: September 16, 1998
APPLICATION NUMBER: PCT/US98/25108
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FILING DATE: MATCH 3, 1999
APPLICATION NUMBER: PCT/US99/12252
FILING DATE: June 22, 1999
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APPLICATION NUMBER: 60/074,086
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APPLICATION NUMBER: 60/112,850
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APPLICATION NUMBER: 60/069,702
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FILING DATE: July 28, 1999
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Grimaldi, Christopher
Gurney, Austin
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APPLICATION NUMBER: 60/06
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Filvaroff, Ellen
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Botstein,David
Eaton,Dan
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    US20020168715A1
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APPLICATION NUMBER: PCT/US99/21090 FILING DATE: September 15, 1999

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Sequence 1, Application US/09944896

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                                                                LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu
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CURRENT FILING DATE: 201-09-26
PRIOR APPLICATION NUMBER: 09/866,028
PRIOR FILING DATE: 2001-05-25
PRIOR APPLICATION NUMBER: 60/067,411
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Gurney, Austin
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Filvaroff, Ellen
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul
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Eaton, Dan
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PRIOR FILING DATE: December: 1, 1999
PRIOR FILING DATE: December: 16, 1999
PRIOR PFLICATION NUMBER: PCT/US90/03565
PRIOR PFLICATION NUMBER: PCT/US90/04144
PRIOR FILING DATE: February 11, 2000
PRIOR FILING DATE: February 22, 2000
PRIOR FILING DATE: March 2, 2000
PRIOR FILING DATE: March 30, 2000
PRIOR FILING DATE: March 32, 2000
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APPLICATION NUMBER: PCT/US98/25108
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FILING DATE: June 22, 1999
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APPLICATION NUMBER: PCT/US99/28409
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APPLICATION NUMBER: PCT/US99/30095
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APPLICATION NUMBER: PCT/US00/20710
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FILING DATE: March 2, 2000
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APPLICATION NUMBER: 09/216,021
FILING DATE: December 16, 1998
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APPLICATION NUMBER: 60/074,086
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APPLICATION NUMBER: 60/075,945
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APPLICATION NUMBER: 60/074,092
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FILING DATE: December 16, 1998
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APPLICATION NUMBER: 60/146,222
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APPLICATION NUMBER: 60/069,278
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APPLICATION NUMBER: 60/069,69
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APPLICATION NUMBER: 60/068,017
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        ORGANISM: Homo Sapien
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Oy 281 AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300 	Qy 301 LysLysIleProSerGlyLeuProGluLeuLysTyrLeuGln1leilePheLeuHisSer 320	Qy 321 AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysWetLysLys 340	Oy 341 SerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360	7 361 AlathrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379	RESULT 5 US-09-944-907-1 ; Sequence 1, Application US/09944907	zĸn	; APPLICANT: Eaton, Dan ; APPLICANT: Ferrara Napoleone ; APPLICANT: Filvaroff, Ellen ; APPLICANT: Gerritsen, Mary			; APPLICANT: Tumas, Daniel; APPLICANT: Wood, William; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC; TITLE OF INVENTION: ACIDS ENCODING THE SAME	FILE REFERENCE: P248PICI CURRENT APPLICATION NUMBER: US/09/944,907 "URRENT FILING DATE: 2001-08-31 "RICH APPLICATION NUMBER: 09/866,028	; PRIOR FILING DATE: 2001-05-25 ; NUMBER OF SEQ ID NOS: 120 ; SEQ ID NO 1 ; LENGTH: 2454	; TYPE: DNA ; ORGANISM: Homo Sapien US-09-944-907-1	1.95e-216 1992.00 100.00%	Best Local Similarity: 100.00% Mismatches: 0 Query Match: 100.00% Indels: 0 DB: 9 Gaps: 0	-09-944-88	Qy 1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer 20	Qy 21 ProSerHislleAlaLeuLysAsnMetMetLeuLysAspMetGluAspThrAspAspAsp 40

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954 ACTITATIGGAGCTICACTTAGATTATAATAAAATITCAACAGTGGAACTIGAGGATTTT 1013
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   CTAAGTGAAATACCACTTAATCTTCCCAAATCATTAGCAGAACTCAGAATTCATGAAAAT
                                  LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu
                                               MetSerAlaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThr
                                                                                                                          834 ATGAGTGCAAACCCTCTTGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGACG
                                                                                                                                                          ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro
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CURRENT FILING DATE: 2001-12-19
PRIOR APPLICATION NUMBER: 60/049911
PRIOR FILING DATE: 1997-06-18
PRIOR APPLICATION NUMBER: 60/056974
PRIOR FILING DATE: 1997-08-26
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Filvaroff, Ellen
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TITLE OF INVENTION:
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                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME TILL REPERBENCE: P2548PICT CURRENT APPLICATION NUMBER: US/09/944,929 CURRENT FILING DATE: 2001-08-31 PRIOR PLICATION NUMBER: 09/866,028 PRIOR FILING DATE: 2001-05-25 TUMBER OF SEQ ID NOS: 120 LENGTH: 2454
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Conservative:
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Filvaroff, Ellen
Gerritsen, Mary
Botstein, David
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                                                                                                                                                                                    Roy, Margaret
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                                                                                                                                                                       Napier, Mary
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; ORGANISM: Homo Sapien
US-09-944-929-1
                 Eaton, Dan
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Best Local Similarity:
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APPLICATION NUMBER: 60/08332
FILING DATE: 1998-04-28
FILING DATE: 1998-04-29
FILING DATE: 1998-04-29 APPLICATION NUMBER: 60/086430 FILING DATE: 1998-05-22 FILING DATE: 1998-02-04 APPLICATION NUMBER: 60/074086 FILING DATE: 1998-02-09 FILING DATE: 1998-03-27 APPLICATION NUMBER: 60/080165 FILING DATE: 1998-03-31 FILING DATE: 1998-04-09 APPLICATION NUMBER: 60/081695 FILING DATE: 1998-04-14 APPLICATION NUMBER: 60/081817 FILING DATE: 1998-04-15 FILING DATE: 1998-04-15 APPLICATION NUMBER: 60/082999 PPLICATION NUMBER: 60/085149 ILING DATE: 1998-05-12 FILING DATE: 1998-05-13 APPLICATION NUMBER: 60/085339 FILING DATE: 1998-05-13 ING DATE: 1998-05-15 LICATION NUMBER: 60/085697 APPLICATION NUMBER: 60/086414 FILING DATE: 1998-05-22 PLICATION NUMBER: 60/072320 FILING DATE: 1998-01-23 APPLICATION NUMBER: 60/073612 APPLICATION NUMBER: 60/074092 FILING DATE: 1998-02-09 FILING DATE: 1998-03-12
APPLICATION NUMBER: 60/078910 FILING DATE: 1998-02-27 APPLICATION NUMBER: 60/079728 APPLICATION NUMBER: 60/081203 FILING DATE: 1998-04-09 APPLICATION NUMBER: 60/081229 APPLICATION NUMBER: 60/081818 APPLICATION NUMBER: 60/085323 FILING DATE: 1998-05-13 APPLICATION NUMBER: 60/085579 APPLICATION NUMBER: 60/079294 FILING DATE: 1998-03-25 APPLICATION NUMBER: 60/079663 1998-05-15 1998-03-20 FILING DATE:] FILING DATE:

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SerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360
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 LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRAN
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P333ORIC17
CURRENT APPLICATION NUMBER: US/10/121,049
CURRENT FILING DATE: 2002-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 327, Application US/10121049
Publication No. US20030022239A1
GENERAL INFORMATION:
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Stewart, Timothy A
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Watanabe, Colin K
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Goddard, Audrey
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SEQ ID NO 327
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TYPE: DNA
ORGANISM: Homo Sapien
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Matches:
Conservative:
Mismatches:
Indels:
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                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                           R APPLICATION NUMBER: 60/08959
R PILING DATE: 1998-06-17
R PILING DATE: 1998-06-17
R RAPPLICATION NUMBER: 60/089907
R FILING DATE: 1998-06-18
R APPLICATION NUMBER: 60/08997
                                                                                                                                                     APPLICATION NUMBER: 60/090445
FILING DATE: 1998-06-24
                                                                                                                                                                                                                       APPLICATION NUMBER: 60/091360
FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                         FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
       FILING DATE: 19/98-06-11
APPLICATION NUMBER: 60/089532
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FILING DATE: 1998-06-23
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FILING DATE: 1998-06-24
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APPLICATION NUMBER: 60/090863
FILING DATE: 1998-06-26
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Query Match:
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	321 AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysMetLysLys 340 321 AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysMetLysLys 340 1194 AATTCAATTGCAAGAGTGGGAAATGAATGCTTCTGTCCAACAGGCCAAAGGAAA 125 341 SerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyTTrgGluMetGlnPro 360 1254 TCTTTATAATACAGTCAATAAGTTGTATTATAATACGGGAAATGCAACT 131	361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379	RESULT 9 US-10-123-904-327 : Sequence 327, Application US/10123904 ; Publication NoUS20030022328A1	ž	APPLICANT: Destroyer, Juc * APPLICANT: Gao, Wei-Qiang * APPLICANT: Gao, Wei-Qiang * APPLICANT: Gao, Wei-Qiang * APPLICANT: Gao, Wei-Qiang	APPLICANT: Godowski, Paul J. ; APPLICANT: Gutowski, Paul J. ; APPLICANT: Gutney, Austin L. ; APPLICANT: Sherwood, Steven		# APPLICANT: WOOG, WILLIAM # APPLICANT: Zhang, Zemin # TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC # TITLE OF INVENTION: ACIDS ENCODING THE SAME # TITLE OF INVENTION: ACIDS ENCODING THE SAME	CURRENT APPLICATION NUMBER: US/10/123,904 CURRENT FILING DATE: 2002-04-16 FILOR APPLICATION FORD SEE FILE Wrapper or Palm FILOR PROPERTY OF SEC TO MAG. 550	SEQ ID NO 327 LENGTH: 2454 TYPE: DNA	Scores:	1.95e*210 1992.00 ilarity: 100.00% Similarity: 100.00%	Indels: Gaps: 3-904-327 (1-2454)	Oy 1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer 20	Qy 21 ProSerHisileAlaLeuLysAsnMetMetLeuLysAspMetGluAspThrAspAspAsp 40	Qy 41 Aspaspaspaspaspaspaspaspaspaspaspaspaspas	61
10-121-049-327	Alignment Scores: 1.95e-216 Length: 2454 Pred. No.: 1992.00 Matches: 379 Score: 1992.00 Conservative: 0 Best Local Similarity: 100.00% Mismatches: 0 Query Match: 100.00% Indels: 0 BBs: Document Statement Stateme	9-944-884-2 (1-379) x US-10-121-049-327 (1-2454) 1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer 20	ProserHisllealaLeuLysAsnMetMetLeuLysAspMetGluAspThrAspAspAsp 40	41 AspaspaspaspaspaspaspaspaspGluaspasnSerLeuPheProThrargGlu 60 	61 ProargSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80	81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100	101 PheaspThrargMetLeuaspLeuGlnasnasnLysTleLysGluIleLysGluAsnasp 120 	121 PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140 	141 HisprolysalaPheLeuThrThrLysLysLeuargargLeuTyrLeuSerHisasnGln 160 	161 LeusergluileproLeuasnLeuProLysserLeuAlagluLeuargileHisgluasn 180 	181 LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200 	201 MetSeralaasnProLeuaspasnAsnGlylleGluProGlyAlaPheGluGlyValThr 220	221 ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro 240	241 ThrLeuLeuGlüleuHisLeuAspTyrAsnLysIleSerThrValGlüleuGlüAspPhe 260	261 LysargTyrLysGluLeuGlnàrgLeuGlyLeuGlyàsnàsnLysIleThraspIleGlu 280 	281 ASGGJySerLeuAlaAsnIleProArgYalArgGluIleHisLeuGluAsnAsnLysLeu 300 	1 LysLyslleProSerGlyLeuProGluLeuLysTyrLeuGlnIlellePheLeuHisSer 320

; APPLICANT: Gao, Wei-Qiang ; APPLICANT: Gerritsen, Mary E. ; APPLICANT: Goddard, Audrey ; APPLICANT: Godowski, Paul J. ; APPLICANT: Sherwood, Steven.	; APPLICANT: Smith, Victoria ; APPLICANT: Stewart, Timothy A. ; APPLICANT: Watanabe, Colin K	APPLICANT: WOOG WILLIAM APPLICANT: Abody Zemin TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME	; CURRENT APPLICATION THOMBER: US/10/140,470 ; CURRENT PILING DATE: 2002-05-06 ; Prior Application removed - See Palm or File Wrapper	SEQ ID NO 327 LENGTH: 2454 TYPE: DNA	ć	Percent No.: 1.95e-21b Length: 2454 Score: 1992.00 Matches: 379 Percent Similarity: 100.00% Mismatches: 0 Best Local Similarity: 100.00% Mismatches: 0	100.00* Indexs: 9 Gaps: 9) x US-10-140-470-327 (1-2454)	Qy 1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer 20	Qy 21 ProSerHisIleAlaLeuLysAsnMetWetLeuLysAspWetGluAspThrAspAspAsp 40	Oy 41 AspaspaspaspaspaspaspaspaspaspaspaspasnSerLeuPheProThrargGlu 60	Qy 61 ProArgSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80	Qy 81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100	Oy 101 PheAspThrargMetLeuaspLeuGlnAsnAsnLysIleLysGlulleLysGluAsnAsp 120	Qy 121 PheLysGlyLeuThrSerLeuTyrGlyLeu1leLeuAsnAsnAsnLysLeuThrLysIle 140	Oy 141 HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160	Qy 161 LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsn 180	Qy 181 LysValLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200
ICTTTCCAATGTGTCCATTGGATGTCAGTGC 473 UGTTCCAATGTGTCCATTGGATGTCAGTGC 473 UGIYLeuThrSerValProThrAsnIlePro 100 ICTTTGACCTCAGTCCCAACCAACACATTCCA 533	PheaspThrargMetLeuaspLeuGlnasnasnLysIleLysGluIleLysGluasnasp 120 	eulleLeuAsnAsnLysLeuThrIysIle 140 	ysLeukrgArgLeuTyrLeuSerHisAsnGln 160 	ysSerLeualaGluLeuarglleHisGluasn 180 	heLysGlymetAsnAlaLeuHisValLeuGlu 200 	yllegluproglyalaPhegluglyvalThr 220 		nniysileserThrValGluLeuGluAspPhe 260 	yLeuGlyasnAsnLysIleThraspIleGlu 280 	alargGluileHisLeuGluAsnasnLysLeu 300 	utysTyrLeuGlnIleIlePheLeuHisSer 320 	pphecysprothrvalprolysmetlyslys 340 	nAsnproValLysTyrTrpGluMetGlnPro 360 	ətSerValGlnLeuGlyAsnPheGlyMet 379 			
Db 414 CCAAGAAGCCATTTTTTCCATTTGATCTGTTTCCAATGTGTCCATTTGGATGT Qy 81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValPrOThrAsn	Oy 101 PheAspThrArgMetLeuAspLeuGlnAs 	Oy 121 PhelysGlyLeuThrSerLeuTyrGlyLeu1leLeuAsnAsnLysLeuThr 	Qy 141 HisProLysalaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHis 	Oy 161 LeuSerGlulleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHis- 	181 LysValLysLileClnLysAspThrPheLysGlyMetAsnAlaLeuHisVal 	OY 201 MetSerAlaAsnProLeuAspAsnAsnGly11eGluProGlyAlaPheGluGly	Oy 221 ValPheHislleArglleAlaGluAlaLysLeuThrSerValProLysGlyLeu 	Qy 241 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGlu 	Qy 261 LysArgTyrLysGluLeuGlnargLeuGlyLeuGlyAsnAsnLys1leThrAsp 	Qy 281 ASDG1ySerLeuAlaASDI1eProArgValArgG1uIleHiSLeuG1uAsDASDASDASDASDASDASDASDASDASDASDASDASDASD	Qy 301 LyslyslleProSerGlyLeuProGluLeuLysTyrLeuGlnileTlePheLeu 	321 AsnSerIlealaArgValGlyValAsnAspPheCysProThrValProLysMet	Oy 341 SerLeuTyrSerAlaileSerLeuPheAsnAsnProValLysTyrTrpGluMet Db 1254 TCTTATACAGTGCAATAAGTTTATTCAACAACCGGTGAAATACGGGAAATG	Qy 361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGly 	RESULT 10 US-10-140-470-327 ; Sequence 327, Application US/10140470 : bublication Wo professional professiona	GENERAL INFORMATION: ; APPLICANT: Baker, Kevin P. ; APPLICANT: Beresini, Maureen	: APFLICANT: Descripe, Luc : APFLICANT: Filvaroff, Ellen

Alignment Scores: 1.95e-216 Length: 2454 Score: 1992.00 Matches: 379 Percent Similarity: 100.00% Conservative: 0 Best Local Similarity: 100.00% Mismatches: 0 Ouery Match: 9 Gaps: 0 US-09-944-884-2 (1-379) x US-10-175-746-327 (1-2454)	Qy 1 MetLysGluTyrValLeuLeuLeuPheLeuAlaLeuCysSerAlaLysProPhePheSer 20	Qy 21 ProSerHisIleAlaLeuLysasnMetMetLeuLysaspMetGluAspThraspAspAsp 40	Oy 41 Aspaspaspaspaspaspaspaspaspaspaspaspaspas	Qy 61 ProArgSerHisPheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80	Qy 81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsn11ePro 100	Qy 101 PheAspThrargMetLeuAspLeuGlnAsnAsnLysIleLysGluIleLysGluAsnAsp 120 	Qy 121 PheLysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140 	Oy 141 HisProLysalaPheLeuThrThrLysLysLeuArgargLeuTyrLeuSerHisAsnGln 160 	Oy 161 LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuArgIleHisGluAsn 180	Qy 181 LysValLysLysTleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu 200 	Qy 201 MetSeralaAsnProLeuAspAsnAsnGlyIleGluProGlyAlaPheGluGlyValThr 220	Oy 221 ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro 240 	Oy 241 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe 260 	Oy 261 LysargTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThraspIleGlu 280 	Oy. 281 AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300 	Qy 301 LysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSer 320
Db 774 AAAGTTAAGAAATACAAAAGGACACATTCAAAGGAATGAAT	Qy 241 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe 260	Qy 261 LysargTyrLysGluLeuGlnArgLeuGlyAeuGlyAsnasnLysIleThraspIleGlu 280 	281 AsnGlySerLeualaasnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300	Qy 301 LysLysIleProSerGlyLeuLysTyrLeuGlnIleIlePheLeuHisSer 320 	Qy 321 AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysMetLysLys 340	Qy 341 SerLeuTyrSeralaIleSerLeuPheasnAsnProValLysTyrTrpGluMetGlnPro 360	Qy 361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379 	ш ол	; Publication No. US200300272/0A1 ; General Information: ; APPLICANT: Baker, Kevin P. : APPLICANT: Beresini, Maureen	APPLICANT: APPLICANT: APPLICANT: APPLICANT:	APPLICANT: APPLICANT: APPLICANT: APPLICANT:	APPLICANT: Sherwood, Steven APPLICANT: Smith, Victoria APPLICANT: Stewart, Timothy APPLICANT: Tumas, Daniel	NSMI	TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C353 CURRENT APPLICATION NUMBER: US/10/175,746 CURRENT FILING DATE: 2002-06-19	. 01	; TYPE: DNA ; ORGANISM: Homo Sapien US-10-175-746-327

ArgvalGlyvalAsnAspPheCysProThrvalProLysMetLysLys 340	λο 	>-	81 TyrSerArgValValHisCysSerAspLeuGlyLeuThrSerValProThrAsnIlePro 100
	q a 		
SerLeuTyrSerAlaIleSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360 	oy G		101 PheaspThrargMetLeuaspLeuGinasnasnLysIleLysGluileLysGluasnasp 120
AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379 	QQ QD		121 PhelysGlyLeuThrSerLeuTyrGlyLeuIleLeuAsnAsnAsnLysLeuThrLysIle 140
27 Application US/10176918	δδ D		141 HisprolysalaPheLeuThrThrLysLysLeuArgargLeuTyrLeuSerHisAsnGln 160
NO. USZUJOUZIZIZAI RMATION: Baker, Kevin P. Beresini, Maureen	da		161 LeuSerGluIleProLeuAsnLeuProLysSerLeuAlaGluLeuargIleHisGluAsn 180
Desonopers, Lucr Filvaroff, Ellen Gao, Wei-Qiang	da		181 LysvalLysLysIleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisvalLeuGlu 200
Goddard, Audrey Goddowski, Paul J. Gurney, Austin L.	da da		201 MetSeralaAsnProLeuAspAsnAsnGly11eGluProGlyAlaPheGluGlyValThr 220
	<u> </u>	Qy 2 Db 8	221 ValPheHisIleArgIleAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro 240
APPLICANT: Watenabe, COlin K APPLICANT: Wood, William APPLICANT: Zhang, Zemin APPLICANT: Zhang, Zemin TITLE OF INVENTION: SECRETED, AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC		Oy 2 Db 9	241 ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe 260
FILE REFERENCE: P3130R1C382 CURRENT APPLICATION NUMBER: US/10/176,918 CURRENT FILING DATE: 2002-06-20	<u> </u>	Qy 2 Db 10	261 LysargTyrLysGluLeuGlnArgLeuGlyLeuGlyAsnAsnLysIleThrAspIleGlu 280
Filor Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550 EQ ID NO 327 LINGTH: 2454	<u> </u>	Oy 2 Db 10	281 AsnGlySerLeuAlaAsnIleProArgValArgGluIleHisLeuGluAsnAsnLysLeu 300
Sapien		Oy 3	301 LysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSer 320
1.95e-216 Length: 2454 1992.00 Matches: 379 100.00% Constructive: 0		Oy 3	321 AsnSerIleAlaArgValGlyValAsnAspPheCysProThrValProLysMetLys.Jys 340
Indels: Gaps:		Qy 3	341 SerLeutyrSeralaileSerLeuPheAsnAsnProValLysTyrTrpGluMetGlnPro 360
2 (1-379) x US-10-176-918-327 (1-2454) MetLysGluTyrValLeuLeuLheLeuAlaLeuCysSerAlaLysProPhePheSer 20	δ <u>α</u>	F4	361 AlaThrPheArgCysValLeuSerArgMetSerValGlnLeuGlyAsnPheGlyMet 379
ProSerHisIlealaLeuLysasnMetMetLeuLysaspWetGluAspThraspAspAsp 40 	щ р к	RESULT 13 US-10-176-9 Sequence Publicati	RESULT 13 US-10-176-921-327 ; Sequence 327, Application US/10176921 ; Publication NO. US20030027276A1
AspAspAspAspAspAspAspAspAspGluAspAsnSerLeuPheProThrArgGlu 60 		APPLICANT: APPLICANT: APPLICANT:	T: DeForge, Laura
ProArgSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys 80 		APPLICANT APPLICANT APPLICANT APPLICANT	T: Desnoyers, Luc T: Filvaroff, Ellen T: Gao, Met. Qiang T: Gerritsen, Mary E.
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P33330R1C154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/137,865 CURRENT FILING DATE: 2002-05-03
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; Publication No. US20030032155Al
; GENERAL INFORMATION:
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Goddard, Audrey
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Wood,William
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Gurney, Austin L.
Sherwood, Steven
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Filvaroff, Ellen
Gao, Wei-Qiang
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NUMBER OF SEQ ID NOS: 550
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US-10-137-865-327
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Pred. No.:
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APPLICANT:
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                                   APPLICANT: Sherwood, Stevent L.
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APPLICANT: Sanith Victoria
APPLICANT: Stewart. Timochy A.
APPLICANT: Tumas, Daniel
APPLICANT: Tumas, Daniel
APPLICANT: Wood, William
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APPLICANT: Abang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
TITLE OF INVENTION OFFER: 2002-06-20
CURRENT FILING DATE: 2002-06-20
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
20 ID NO 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisProLysAlaPheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisAsnGln 160
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              Godowski, Paul J.
Gurney, Austin L.
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ORGANISM: Homo Sapien
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Percent Similarity:
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er 20 20 C 293	rp 40 rr 353 ru 60 1 60 rG 413	rs 80 473 0 100 533	ip 120 	n 160 A 713 180 1 773	LU 200 H 833 LT 220 IT 220 IG 893		ne 260 	A 1073 u 300 l 1133	r 320 T 1193 S 340
1992.00 Matches: 379 3	ealaleulysasnWetWetLeulysaspWetGluaspThraspAspAspAspAspAspAspAspAspAspAspAspAspAs	ProArgSerHisPhePheProPheAspLeuPheProMetCysProPheGlyCysGlnCys	PheAspThrArgMetLeuAspLeuGlnAsnAsnLysIleLysGluIleLysGluAsnAsp	HisproLysalapheLeuThrThrLysLysLeuArgArgLeuTyrLeuSerHisasnGln	LysValLysLysTleGlnLysAspThrPheLysGlyMetAsnAlaLeuHisValLeuGlu	ValPheHisileArgileAlaGluAlaLysLeuThrSerValProLysGlyLeuProPro 	ThrLeuLeuGluLeuHisLeuAspTyrAsnLysIleSerThrValGluLeuGluAspPhe	AACAACAAAATCACAGATATCGAA 11eHisLeuGluasnasnLysLeu 11	LysLysIleProSerGlyLeuProGluLeuLysTyrLeuGlnIleIlePheLeuHisSer
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1992.00 100.008 100.008 9 9 x US-10-1 UTYTVALLEUL 		rHisPhePhel	LLIGATELEUM TCGAATGCTTG YLEUThrSerI	SALAPheLeul 	SLYSILEGINI 	sileargile TATCAGAATTG	uGluLeuHisI 	CAAAGAACTAC TLeuAlaAsnI 	eProSerGlyL
Simila Sal Sin atch: 14-884- 1234	21 ProSerHislle 	61 ProArgSe: 414 CCAAGAAGG 11 TYPSETATY 474 TATTCACG	101 Pheaspth 534 TTTGATAC: 121 PheLysGI: 	141 HisProLys 654 CACCCAAAI 161 LeuserGlt 714 CTAAGTGA	181 LysvalLys 774 AAAGTTAAC 201 MetSerala 		241 ThrLeuLeu 954 ACTTTATT 261 LySAKGTY1	1014 AAACGATAC 281 ASBG1ySe1 1074 AATGGGGG	301 LysLysIle 1134 AAAAAATC
Score: Percent Best Loc Query Mb: US-09-94 Qy	Oy Oy Oy	o co	oy Oy Oy	oy Oy Db	oy op t	QQ	oy oy	DP Oy DP	oy oy

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